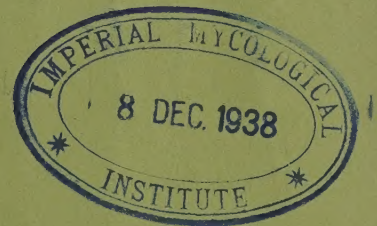




**REPORT OF THE
DEPARTMENT OF AGRICULTURE
OF BRITISH HONDURAS
FOR THE YEAR
1937**





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Printed by the Government Printer, Belize.



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ADDRESS OF OFFICERS.

Agricultural Officer, Belize	Box 149, Belize.
Asst. Agricultural Officer, Stann Creek	Agric. Station, Stann Creek.
Asst. Agricultural Officer, Corozal	Agric. Station, Corozal.
Agricultural Instructor, Punta Gorda	Rice Expt. Station, Punta Gorda.

STAFF LIST.

Agricultural Officer	H. P. Smart, B.Sc. Agr. (S.Af.), A.I.C.T.A.
Asst. Agricultural Officers	R. A. Kitching, J.P., C.D.A. (Edin). H. L. Manning, Dip. Agr. (I.C.T.A.).
Agricultural Instructor (Rice Officer)	D. D. Haynes.
Foreman, Agric. Station, Stann Creek	A. E. Wyatt.
Foreman, Agric. Station, Corozal	F. F. Orio.
Temporary Local Asst. Rice Expt. Station	C. D. W. Atkins.
Secretary, Board of Agriculture	W. A. Grant.

CLERICAL STAFF.

W. A. Grant	Chief Clerk, Head Office, Belize.
H. O. E. Longworth	Chief Clerk, Head Office, Belize.
G. T. McKesey	Clerk, Agric. Station, Stann Creek.
E. S. Elliot	Clerk, Agric. Station, Stann Creek.
C. A. Burgess	Junior Clerk, Head Office, Belize.
Miss S. I. Jex	Typist, Head Office, Belize.
Win. A. Grant	Messenger, Head Office, Belize.

STAFF MOVEMENTS.

R. A. Kitching, Asst. Agricultural Officer, returned from oversea's leave on February 14th.

A. E. Wyatt, Foreman, Agric. Station, Stann Creek, resigned with effect from 28th February.

W. A. Grant, Chief Clerk, transferred to Public Works Department with effect from 9th December.

H. O. E. Longworth, appointed Chief Clerk with effect from 9th December.

G. T. McKesey, Clerk Agstat, Stann Creek transferred to Medical Department with effect from 1st July.

E. S. Elliot, appointed Clerk Agstat, Stann Creek with effect from 1st July.

SECTION I.**AGRICULTURE IN GENERAL.****WEATHER CONDITIONS.**

1. The year was again very wet, heavy flooding being experienced in many areas during July, August and October. Crop production being seriously affected, the corn crop suffering the most.

The wet weather experienced also encouraged the spread of Sigatoka Disease of Bananas.

GENERAL SITUATION.

2. There has been a slight increase in the number of persons going onto the land, the majority being solely interested in the cultivation of bananas, in spite of the many setbacks received by this crop from Panama Disease, Sigatoka, unsuitable soil and climatic conditions and poor means of transport. It is still the only crop that the small planter feels he can get a quick return from and the only one he is really interested in, it being very difficult to convince them that any other crops are worth trying.

3. In the North of the Colony where bananas are practically out of the question, the cultivation of Sugar Cane, Citrus, vegetables and Coconuts is making headway and there is every prospect that Tobacco, Corn and pulses will receive increased and intelligent interest in the near future.

4. In the Belize and Cayo Districts all the new agricultural activity is concerned solely with Bananas, except for some small areas near Belize where citrus, mangoes and other fruit trees and vegetables are being grown.

The areas on the upper reaches of the Belize River are the most promising for Banana cultivation and were coming along nicely, lately however Sigatoka Leaf Spot has appeared in these areas and looks like setting back if not completely ruining the Banana Industry of these areas.

The configuration of the land, the size of the areas under cultivation, the type of labour obtainable and the lack of capital make the use of control measures extremely difficult if not impossible.

5. In the Stann Creek District there is now an alternative crop to Bananas, Cassava, but the small holder is not interested yet, still attempting to grow bananas on lands that were abandoned in the past on account of Panama Disease.

Sigatoka has been seen all over the district but so far without seriously effecting the crops, where it was severe, Panama Disease was also severe and would have reduced the crop.

No doubt, when the Empire Starch Products Co. start purchasing Cassava roots, the small man will start to take an interest in the crop and will start planting, it is significant that those who did have some cassava planted and were able to sell planting material to the Empire Starch Products Co. have planted out larger areas of Cassava.

6. In Toledo the Banana Industry has suffered seriously both from Panama Disease and Sigatoka and the planters are looking for other crops, there are signs that there will be a much larger area under rice during the coming year and some of the bigger men are putting in citrus.

They got so keen on bananas in this area that the Indians, on the Indian Reserves, neglected to plant any corn which is their main food, in order to plant bananas and had to import corn from other areas, when in the past they have been the main suppliers of corn for the Colony.

CONDITION OF CHIEF AGRICULTURAL CROPS.

7. **Bananas.** The area under Bananas increased considerably especially in the Belize and Cayo Districts and the total output for the year was 938,985 bunches being the highest recorded for the Colony, most of the fruit coming from the Belize River area.

8. It is expected that the output of bananas will continue at this level for three or four years when there will be a decline unless some means is found to control Sigatoka or new areas are found suitable for banana growing.

Table I shows the Export for year 1933-1937.

9. **Coconuts and Copra.** There was further improvement over last year in the export trade of these two commodities, improved prices prevailing.

There was also an increase in the area under coconuts and slightly improved methods of cultivation are being practiced.

10. In the past many of the groves were badly neglected and even now with improved prices are hardly paying concerns, chiefly on account of the low state the trees were allowed to get into with the consequent reduction of crops.

Table II shows Exports for the years 1932-1937.

11. **Citrus.** This industry is still going ahead both in the Stann Creek and Corozal Districts, the prices received during the past year were favourable but the crop was not up to expectation although an improvement on last year.

12. The majority of the 1937-38 seasons crop came in early and met good markets both in London and Canada, the average prices returned to the growers for the first pool (July, August and September) being for Marsh Grapefruit \$1.15 per case and Duncan 45¢ per case. Prices fell off during the last three months of the year but the shipments during this period were much smaller, the majority of the "second-crop" fruit it is expected will be fit for shipping in April or May of 1938.

13. The Canning and Juicing of Grapefruit was continued with success, the necessity for canning and juicing was chiefly on account of the large size of the fruit, 40% of the crop being too large to be shipped as fresh fruit.

Trials are being carried out to find out if the size of the fruit can be reduced by suitable fertilizing and cultivating, but the real reason for this high percentage of large fruit is probably on account of the large number of young trees which have just started to bear.

14. An Association has been formed in the Corozal District, The "Corozal Producers' Association", which will handle the Citrus crop from that area, as well as other produce, a packing shed being erected in Corozal.

15. The Acreage under citrus has increased during the past year, and the estimated areas are as follows :—

		Grapefruit	Oranges	Other Citrus
Stann Creek	..	1,026 Acs.	45 Acs.	51 Acs.
Corozal		152 "	93 "	5 "
Belize		55 "	12 "	2 "
Cayo		5 "	2 "	2 "
Toledo		10 "	2 "	2 "

Stann Creek and Corozal are the only districts that export fruit as yet.

16. Table III shows exports of Citrus Fruits and bye-products for the past five years.

17. **Rice.** The Government has received very little support from the local planters with regard to this crop, the amount produced having decreased considerably during the past three years, principally on account of the interest being taken in the growing of Bananas.

18. There were signs during the past year of a little more interest being taken in this crop and it is expected that there will be a definite improvement in 1938, especially in the Toledo District, where the Rice Experimental Station is situated.

19. Table IV. gives the production of Padi by areas for the past five years.

20. Cassava. This industry is not progressing as fast as was hoped various setbacks due to weather, labour, ill-health, having kept back the operations of the Empire Starch Products Co. In the Stann Creek District, there is now a large area planted with cassava and as most of the machinery for the factory is already in the Colony it is hoped that during 1938 the factory will be erected and that this industry will go ahead.

It is felt that once the Company starts to manufacture starch and buy roots the local planters will take a bigger interest in the crop and plant out larger areas.

21. Sugar Cane. Interest in this crop has been maintained especially in the Corozal District, the new central factory erected there supplying a large part of the Colony's sugar requirements during the past year, and it is expected that it will supply the greater part during the coming year.

Improved methods of cultivation and planting improved varieties of cane have gone a long way towards making a success of this industry and giving it a new lease of life.

22. Corn (Maize). There was a good supply of corn from the 1936 crop and supplies were obtainable from the Board of Agriculture until a few weeks before the 1937 crop was reaped.

23. The 1937 crop was much lower than the previous year and the Board of Agriculture has been unable to accumulate any stocks all the corn bought in being resold at once.

The chief reasons for this reduction in the corn crop are (1) adverse weather conditions and (2) the planting of Bananas in preference to corn.

24. It is expected however that more corn will come on to the market when prices improve. But in the Toledo District, some of the Indian Reservations which in past years have produced the greater part of the Colony's supply of corn have gone in for bananas to such an extent, to the neglect of corn, that they are now having to purchase corn for their own domestic use from outside.

This is a very serious matter as the bananas in this area are going down rapidly with Panama Disease and Sigatoka and if this "money-crop" collapses and there is no corn or insufficient corn planted the Indians in these areas are liable to be short of food.

25. Pulses. A little more interest is being taken in these crops, principally with regard to Red Kidney Beans and Black Eye Beans, the majority however being consumed by the grower very little coming on to the market.

26. Miscellaneous Food and Vegetable Crops. There has been a continued improvement in the production of the above crops, both in quantity and quality especially in the Corozal District where the "Producers' Association" have started shipping supplies of vegetables to the Belize Market.

27. Miscellaneous Money Crops. Crops coming under this head have so far been produced only for local use or experimentally in a very small way, tobacco is the most promising, with possibilities for Ginger, Tung Oil, Cotton and various tropical fruits.

LIVESTOCK.

28. There is still very little change in this industry, cattle are receiving more attention in the Stann Creek District principally on account of the Banana plantations going out of cultivation through Panama Disease, but good breeding stock has been difficult to obtain and has held up the expansion of this industry in this area.

29. There is quite a large number of cattle in the Cayo and Orange Walk Districts, but the difficulty of transporting them to Belize, where the main market is, and the lack of pastures near Belize to keep them on prior to selling makes the trade unremunerative, the owner once he gets them to Belize, having in most cases to bring them over land for more than 100 miles has to dispose of

them at once at prices far below their real value, as the buyers in Belize know that his only alternative to accepting the price offered is to take them back immediately to where they came from, and in many cases the price offered is below that paid for cattle imported from the neighbouring Republics, which usually are inferior to the local animals.

Cattle from the Republics cost on an average \$10.00 per head and to this is added the freight cost of \$5.00 per head and an import duty of \$6.00 per head making the total average cost landed Belize or any of the other ports, \$21.00 per head.

30. Pig raising continues to be of importance, especially amongst the Indians of the Toledo Indian Reserve, and a greater interest is being taken in this industry in other parts of the Colony, partly in order to use up rejected bananas, the demand for animals of improved breeding has increased beyond the capability of the Agricultural Department to supply it at present, and more use has been made of the Berkshire Boar kept by the Department for the servicing of sows.

31. Poultry raising continues to be popular, but during the winter months there was a shortage of eggs the price going up to as high as 60¢ and 75¢ per dozen.

One of the chief drawbacks to poultry-raising in this Colony is the very high cost of feeding, many of the bigger breeders importing most of the food required, the possibility of producing enough local food of a suitable quality is a point that wants looking into.

32. The raising of any other kind of stock remains about the same.

Sheep and goats would appear to be on the increase and the raising of horses and mules is principally confined to the Cayo District.

PEST AND DISEASES.

33. **Citrus.** No very serious pests or diseases troubled this crop during the past year, the most serious being those which disfigure the fruit such as Rust mite, scale, melanose and scab spraying and dusting to control these was carried out on the principal groves but not to a sufficient extent, and the results obtained were in many cases unsatisfactory.

34. A root rot has caused trouble in some young groves, on Grapefruit, Oranges, and lemons budded on sour orange, the symptoms being the same as those described in the Report of the second meeting of the British West Indies Fruit and Vegetable Council (Eastern Group) of February-March 1937 under "Notes on Grapefruit Diseases in Trinidad" (by R. E. P. Baker) page 61 (2) "Grapefruit Root Rot", being particularly prevalent on recently drained land that was inclined to be swampy in the Stann Creek District.

35. **Bananas.** "Panama Disease" continues to be the most serious disease of this crop and has started to spread rapidly in areas where for some time it was practically absent, principally because the planters concerned made no attempt to carry out instructions in methods to help prevent the spread of this disease.

36. "Sigatoka Leaf Spot" has spread all over the Colony during the past year, being found also on those areas which so far have been free from "Panama Disease."

In the Toledo District it has been particularly destructive and combined with "Panama Disease" has ruined many of the plantations in that area.

So far it has not proved to be very serious in any of the other banana areas but it is feared that with suitable weather conditions it will in some of them.

37. Instructions of methods to try and help control this disease have been given to the planters but the conditions of the Banana plantations in British Honduras make control very difficult if not impossible.

Systematic pruning off of diseased leaves is the only method practiced to any extent and is probably the only method feasible locally.

Spraying, using hand worked spray machines, knapsack, and barrow type, has been tried with little success, and the cost was prohibitive.

38. Coconuts. Coconut Scale (*Aspidiotus Destructor*) has become a serious pest, especially on some of the coastal plantations in the South.

This disease was no doubt introduced from the neighbouring Republics to the south, where it has been prevalent for some time, as there is a continual travelling of small boats to and fro between those Republics and small villages along the coast of this Colony, coconut leaves being used to cover the cargoes carried.

SPECIAL FEATURES.

39. The Board of Agriculture continued on the same lines as last year, the personnel of the Board being as follows :—

The Agricultural Officer—Chairman.
H. Stansbury Esquire—Vice-Chairman.
R. H. Eyles Esquire.
E. J. Hofius Esquire.
H. A. Gabb Esquire (nominated by the B.H. Agricultural Society).
T. F. Bowman Esquire.

40. The main function of the Board has been the buying, processing and selling of Maize, Rice, Red Kidney Beans and other pulses, it met every three months to decide on the prices that were to be paid for the various commodities bought and sold.

41. Land Settlement. The Agricultural Settlement, at Rockstone Pond was started, a supervisor being appointed and twenty-five settlers being put onto the land, the condition of settlement being briefly as follows :—

(a) Each settler to receive about 15 acres of land.

(b) Land to be tax and rent free for the first three years.

(c) Land then may be purchased at the rate of \$1.50 per acre payable in 10 equal semi-annual instalments or in one lump sum. Land at the end of the first three years to be subject to Land Tax.

(d) Each settler during the first 12 months will be eligible for three days work each week on some work of a public nature in the near vicinity e.g. road building. Payment at the rate of 75 cents per day will be given.

(e) Tools to the value of \$6.00 and seed to the value of \$5.00 will be advanced their cost being recovered by small weekly deductions from the wages received.

(f) The settlement is to be provided with a demonstration plot and a resident agricultural supervisor.

(g) The conditions obtaining for the development of Crown Grants will apply also to lands in the Settlement.

42. The majority of the settlers taken on look like making a success of their plots, so far the main "money-crops" grown have been, Maize, Rice and Red Kidney Beans, while a few have done encouragingly well with vegetables and ground provisions.

They all have sufficient ground provisions to supply them with that type of food and most of them enough pulses, but none of them are as yet in a position to be able to dispense with the outside work the Government is supplying them with.

This work consist of building the road which joins up the Settlement with the main Belize-Orange Walk Road, this work will probably take the settlers another 12 months to complete, by that time they ought to be in a position to look after themselves.

43. An Agricultural Show was held in Belize on 2nd and 3rd April, 1937. This as an Agricultural Show for the Colony was disappointing, both in the

quantity and the quality of the exhibits, the Department's stall being the only one that showed in any way what could be produced in the Colony, the vegetables produced on the Corozal Agricultural Station being particularly conspicuous.

The "Home Industries" section of the show was far ahead of the agricultural section, most of the exhibits coming from Belize. For the next 2 or 3 years it has been decided to hold these shows in the Districts, so as to be nearer the points of production, by this means it is hoped that more interest will be taken, with an improvement in the exhibits.

SECTION II. DEPARTMENT OF AGRICULTURE.

44. Mr. R. A. Kitching, Assistant Agricultural Officer, Stann Creek returned from overseas leave in February.

45. Mr. A. E. Wyatt, Foreman of the Stann Creek Agricultural Station resigned in February in order to take over the post of Agricultural Superintendent with Empire Starch Products Company.

46. The District Agricultural Officers have continued to carry out their normal duties which include district extension work, management of their District Agricultural Stations and export fruit inspection.

47. The work being done on the various stations will be found in the various District Reports.

SECTION III. EXPENDITURE AND REVENUE.

Expenditure.

1	Personal Emoluments	..	..	..	\$12,268.84	\$12,268.84
	<i>OTHER CHARGES.</i>					
11	Transport and Travelling	..	..	..	\$1,461.73	
12	Books and Periodicals	..	..	..	160.69	
13	Herbarium and Museum	..	..	..	9.83	
14	Laboratory Equipment	..	..	..	62.17	
15	Samples and Exhibits	..	..	..	22.88	
16	Rental of Office	..	..	..	300.00	
17	Incidentals and Freight	..	..	..	386.32	
18	Investigations and Trial Shipment	..	..	..	1,041.15	
19	Plant Nurseries, Seeds & Plants	..	..	..	848.51	
20	Meteorological Instruments	..	..	..	33.05	
21	Bicycle Allowance	..	..	..	18.00	
22	Inspection of Fruits Exports	..	..	..	3.55	
23	Provision & Maintenance of Working Livestock	..	..	..	1,545.27	
24	Stock Breeding	..	..	..	79.43	
25	Fertilizers and Insecticides	..	..	..	397.95	
26	Trackage & Upkeep of Cars & Tractors	..	..	..	303.58	
27	Implements and Upkeep and Repairs	..	..	..	172.18	
28	Tools and Equipment purchase of	..	..	..	499.57	
30	Training of Pupils	..	..	..	46.08	
31	Agstat, Stann Creek	..	..	..	3,420.68	
32	Agstat, Corozal	..	..	..	2,502.17	
33	Rice Station, Punta Gorda	..	..	..	2,195.49	
34	Citrus Nurseries & Plant Introduction	..	..	..	1,535.81	
35	Soil Surveys	..	..	..	54.34	
38	Control of Pests	..	..	..	32.50	
39	Purchase of Lorry	..	..	..	717.15	
43	Labourers' Huts	..	..	..	782.95	
44	Laboratory Equipment Corozal	..	..	..	438.81	
	Ploughing Cane Farmers Land Corozal	..	..	..	105.90	19,177.74

Rockstone Pond Settlement	..	..	2,607.71	
Advances—Board of Agriculture	..	..	7,391.13	
Advances—Agstat, Stann Creek	..	..	248.07	
Advances—Wee Wee Ant Control	..	..	355.07	
Deposit Rockstone Pond Settlement	..	..	359.17	10,961.15
				<u>\$42,407.73</u>

Revenue.

Sale of Produce and Plants, Agricultural Stations			\$2,132.38	
Sale of Citrus Plants	..	..	536.91	
Advances—Wee Wee Ant Control	..	..	267.22	
Advances—Agstat. Stann Creek	..	..	76.02	
Advances—Board of Agriculture	..	..	3,305.78	
Deposit Rockstone Pond Settlement	..	..	159.10	\$6,477.41
				<u>\$6,477.41</u>

R. A. KITCHING,
Acting Agricultural Officer.

29.3.38.

SECTION IV. (A).

REPORT ON THE AGRICULTURAL STATION AND DISTRICT STANN CREEK FOR THE YEAR 1937.

I. DISTRICT.

1. During the past year the general agricultural aspect of the District has improved a little, although the area under bananas has decreased and many of the small holders have left, in order to get lands elsewhere in the Colony for banana growing. Those who have remained are trying out other crops, which should prove more reliable and lasting than bananas and should make them more useful and permanent settlers.

2. The weather has been very wet, a very short "Dry Season" being experienced, heavy flooding, when the rivers overflowed their banks occurring on three occasions.

BANANAS.

3. The Banana crop declined rapidly towards the end of the year, chiefly because of the scarcity of new banana lands and the spread of Panama Disease in the old plantations, also the grading by the buyers has become stricter with a correspondingly larger number of rejects.

4. Sigatoka Disease has made its appearance over most of the Stann Creek Valley, whether it has as yet seriously affected the crop is doubtful as where it has been at all severe the bananas were also badly attacked with Panama Disease, only in one instance has it been seen severely damaging the crop without Panama Disease being also present.

5. Some of the land going out of Banana cultivation is being planted with other crops such as Cassava, Citrus, Coconuts, Maize and Pulses, other areas being put under pasture.

6. The following are the shipments of Bananas made for the past five five years. (in bunches).

	1933	1934	1935	1936	1937
January .. —		6,593	11,121	14,336	13,267
February .. —		7,370	11,598	10,324	12,623
March —		4,667	8,800	7,895	10,405
April —		7,090	9,845	11,480	14,976
May —		9,659	13,273	15,076	13,241
June —		12,870	11,825	21,634	17,073
July —		13,160	12,784	24,336	18,414
August —		14,028	12,186	22,545	14,078
September .. —		12,567	10,845	24,274	14,669
October —		13,373	12,581	18,501	8,386
November .. —		13,699	8,037	16,501	4,914
December .. —		10,676	9,119	15,476	6,362
Total the Valley —		—	132,014	202,378	148,408
Other parts of District (approx.) —		—	12,000	36,000	30,000
Totals ..	57,374	125,752	144,014	238,378	178,408

7. It is estimated that the 1938 crop will be 30% lower.

8. There was no demand for export for varieties other than Gros Michel, the existing plantations of Lacatans and Cavandish Bananas being used locally and for feeding pigs.

CITRUS.

9. The area under Citrus has again increased, the principal plantings being of Marsh Seedless Grapefruit, followed by Valencia Oranges and King Mandarins.

10. The following is the acreage under Citrus in the Stann Creek District now :

GRAPEFRUIT	Bearing	Non-bearing	Total
Marsh Seedless	219	583	802 Acres
Duncan	108	93	201 "
Other Varieties	7	16	23 "
	334	692	1,026 "
ORANGES			
Valencia	5	15	20 Acres
Other Varieties	10	15	25 "
	15	30	45 "
OTHER CITRUS			
Chiefly King Mandarins and Lemons	13	38	51 Acres
Totals	362	760	1,122

11. The crop for the 1936-37 season was 14,876 cases of fresh fruit made up as follows :—

GRAPEFRUIT	Marsh Seedless ..	10,967 cases
	Duncan	3,226 "
	Other Varieties ..	427 "
		14,620 cases

ORANGES	Valencias	175	„	
	Washington Navals ..	17	„	
	Other Varieties	55	„	
				247
LEMONS		7		7
OTHER CITRUS		2	„	2
				<u>14,876 cases</u>

12. The following amounts of "Canned" and "Juiced" fruit were also shipped :

Canned Grapefruit	2,615 cases
Canned Grapefruit Juice	812 „
Grapefruit Juice in Barrels	2,350 galls.

13. These are equivalent to about 6,000 cases of fresh fruit bringing the total output from the District for the 1936-37 crop to about 20,876 cases.

Local Sales—Fresh Fruit.	Grapefruit ..	500 cases	
	Oranges ..	156 cases	656 cases

14. For the first half of the 1937-38 crop. July to December 1937, the number of cases shipped is 20,367 cases of fresh fruit, made up as follows :—

GRAPEFRUIT	Marsh	13,854 cases	
	Duncan	6,108 „	
			19,962 cases
ORANGES	Valencia	145 „	
	Washington		
	Naval Orange	19 „	
			164 cases
OTHER CITRUS	King Mandarin ..	148 „	
	Lemons	30 „	
	Dancy Tangerines ..	63 „	
			241 „
			<u>20,367 cases</u>

approximately another 6,000 cases were "canned and juiced."

15. The 1936-37 crop did not come up to expectations, principally on account of the drought experienced in 1935, this caused the 1935-36 crop to be late on account of the late flowering and made many of the young groves bear fruit before they should have, the result being that most of the young trees that bore fruit during the 1935-36 season did not bear any during the 1936-37 season. The estimated crops for most of these young groves for the 1937-38 crop is below what they gave in the 1935-36 season.

16. The prices obtained for early and late crop fruit remained very satisfactory but mid-season fruit especially Duncan sold at very low prices.

Oranges shipped to Canada sold for less than in previous years. Lemons shipped to London were a loss, but those shipped to Canada netted very satisfactory prices.

17. The Canning and juicing of Grapefruit is going ahead, and it is the opinion of the local growers that a growing percentage of the crop will be "juiced" and "canned" every year.

18. Experiments with Canned Grapefruit Juice have met with success, the product selling well on the local market, it is hoped and thought that a good market abroad awaits this product.

19. The estimate for 1937-38 crop is :

FRESH FRUIT	Grapefruit	..	..	..	..	35,000	cases
	Oranges	..	..	..	..	1,000	„
	Other Citrus	..	..	..	..	500	„
						36,500	cases
Canned and Juiced Grapefruit	..	..	..	..	..	10,000	cases

20. There has been a lot of flowering during the last quarter of the year so a good "second crop" for the 1937-38 season is expected.

CASSAVA.

21. This industry is going ahead much slower than was expected. The Empire Starch Products Co. have planted about 600 acres of Cassava but the response from the local planters has been very small, most of them apparently waiting to see the new factory erected, the site for which was cleared and prepared during 1936 and houses etc. for the staff and labour erected, but no further work on the factory has taken place. It is understood that it will be erected during 1938, all the necessary machinery is already in the Colony.

22. It is estimated that about 200 acres of Cassava have been planted for supplying the factory by outside persons and there is approximately another 1,000 acres planted for domestic use much of which will probably go to the Starch Co. once they start operations.

23. The area planted out by the Empire Starch Products Co. is growing well and looks like giving a good crop. They were held up a lot through bad weather when preparing the land for planting.

COCONUTS.

24. This is the crop which the small man is planting mostly as a permanent crop, following bananas on land where they have been killed out by Panama Disease, and all over the District young plantations are to be seen. In many cases once the bananas have become unremunerative the coconuts have been neglected, it is hoped that once the Cassava Industry gets going and there is an alternative quick money crop to bananas that this trouble will disappear.

The existing bearing plantations are receiving more attention that for some years past, the better prices received lately being a great incentive.

MINOR CROPS.

25. A little more interest is being taken in Coffee planting, but it will be some time before the existing plantations can supply the local demand.

Corn was grown on a much larger scale this year and crops were fairly good.

The planting of pulses is slightly on the increase, especially Red Kidney Beans. It is very difficult to get the local native to eat Pigeon Peas, Bonavista Bean, and Lima Beans etc. which can be grown satisfactorily here, the imported Jamaican settlers will but the local man will not. The same applies to locally grown "ground-provisions" like Yams and Sweet Potatoes, the imported settler eats them preferably while the local man wants Rice, Flour and Red Kidney Beans.

However there has been an improvement in this matter and the area under "ground-provisions" is on the increase.

STOCK.

26. These has been an increase in the area under pasturage, especially on old Banana lands, and there is a demand for breeding cattle in the Valley, it is hoped that in the near future the Department will have a bull of some improved breed in the Valley.

SETTLEMENTS.

27. The Agricultural Settlements at 19 and 20 miles and at 22 and 23 miles.

The better settlers are buying their plots, and those who are proving satisfactory and are trying to establish crops other than bananas on their land are being encouraged by being given some more land.

28. The new road that is being built has stimulated the planting of food crops with the expectation of being able to dispose of these to the labour on the road.

29. It is also expected that many of them will get work on the road which will be a great help in enabling them to carry on until their other crops come into bearing, and the Empire Starch Products Co. start buying Cassava.

A lot of Corn was grown on these settlements during the past year and there are prospects of a good Red Kidney Bean Crop.

30. During the past year the Caribs of the District were granted a new Reservation of over 2,000 acres, a lot of this land is very swampy, but there is some good land on which they have started work on a community basis.

31. At first this scheme looked very promising, but lately their enthusiasm seems to have dropped. They cleared and planted with bananas and corn over 75 acres, but have failed to reap all the corn, as they were more interested in getting out some mahogany which was growing on this land, the mahogany operations are now over and there are signs of the land receiving more attention.

32. It is the intention of the Department to start a small demonstration plot in this Reserve during 1938 to demonstrate improved methods of cultivation, encourage the planting of crops other than bananas, with special consideration being given to the planting of pulses and other food crops, as practically the only food crops grown by the Caribs are Cassava and Plantains, with a very limited amount of Corn and Yams, and by this means it is hoped to improve their diet.

They are the largest growers of Cassava in the Colony, mostly for their own domestic use, the majority of the work being done by the women. It is expected that, as a large area of this land is very suitable for this crop, it will form one of the main sources of supply for the Cassava Products Factory.

II. THE AGRICULTURAL STATION, STANN CREEK

33. This station has now been in existence for five years. During this time trials have been made with most Tropical crops which were thought would be useful for this area, with particular attention being paid to Citrus, Cassava, Coffee, Ginger, Bananas, Pulses, ground provisions, various fruit trees and Tung Oil.

34. The area now under cultivation is now as follows :—

Pasture and Pig Pens	..	..	..	..	..	..	..	10 acres
Citrus Groves	..	..	..	..	..	..	..	25 "
Bananas	..	..	..	..	..	..	..	2 "
Sugar Cane	..	..	..	..	..	..	..	1 "
Cassava	..	..	..	..	..	..	..	12 "
Cacao	..	..	..	..	..	..	..	2 "
Tung Oil	..	..	..	..	..	..	..	3 "
Coffee	..	..	..	..	..	..	..	4 "
Mangoes	..	..	..	..	..	..	..	1 "
Miscellaneous Economic and Fruit Trees	..	..	..	..	..	..	..	4 "
Miscellaneous plots of Pulses, Ground provisions etc.	..	..	..	..	..	..	..	2 "
Fodder and Mulch Grasses	..	..	..	..	..	..	..	3 "
Citrus Nurseries	..	..	..	..	..	..	..	4 "
Other Nurseries	..	..	..	..	..	..	..	2 "
Roads and Drains	..	..	..	..	..	..	..	10 "
House plots and Gardens	..	..	..	..	..	..	..	5 "
Demonstration Small Holding	..	..	..	..	..	..	..	2 "
Fallow	..	..	..	..	..	..	..	21 "

122 acres

35. Very wet weather was experienced during the year, on two occasions heavy floods being experienced when large parts of the Agricultural Station were 12" and more under water. This did particular harm to the vegetable trials and nurseries, which were on the lower lying lands this year.

METEOROLOGY.

MONTH	Relative Humidity			Rainfall		Air Temperatures			Soil Temperature 1 Foot		
	Mean	Highest	Lowest	Inches	Rain Days	Shade Mean Daily Maxm.	Shade Mean Daily Minn.	Mean At 9:00 a.m.	Mean At 3:00 p.m.		
JANUARY	..	..	81	95	71	7.16	20	83	69	79.0	79.1
FEBRUARY	..	..	77	93	61	4.31	10	84	67	78.8	79.3
MARCH	..	..	75	99	61	4.46	8	85	69	79.8	76.7
APRIL	..	..	90	99	76	2.92	10	87	71	82.0	82.0
MAY	..	..	84	99	62	8.45	15	88	72	83.0	83.0
JUNE	..	..	80	99	61	18.27	21	86	73	84.0	81.0
JULY	..	..	78	99	55	24.33	20	86	74	82.0	82.0
AUGUST	..	..	77	98	58	11.67	18	87	73	84.2	84.6
SEPTEMBER	..	..	77	95	57	13.02	24	88	73	84.8	84.8
OCTOBER	..	..	76	97	57	13.02	17	86	71	83.2	85.7
NOVEMBER	..	..	73	95	55	4.76	9	83	66	79.4	79.7
DECEMBER	..	..	80	99	49	9.01	22	80	66	79.0	78.0
TOTALS	..	..	—	—	—	121.38	194	—	—	—	—
MEANS	..	..	79	97.25	60.25	—	—	85	70	81.6	81.3

37. NOTE.—From the 11th to 14th July 15.04 inches Rain fell and from 14th to 16th October 9.29 inches Rain fell.

PLANT INTRODUCTION.

38. The following plants, seeds and planting material were introduced during the past year :

From Jamaica.—Asparagus plumosus, Murraya exotica, Tecoma Capensis, Congea Tomentosa, Triplaris, Bignonia Venusta, Euphorbia pulcherima (Poinsettia). Sugar Cane varieties.

From British Guiana.—Seed of Alysicarpus Vaginalis and Phaseolus semi-erectus.

From Trinidad.—Soya Bean Seed.

From Spanish Honduras.—Seed of Ceiba Acuminata.

From Burma.—Seed of Phaseolus Lanatus vars.

From Calcutta.—Vegetable Seed.

From England.—Vegetable Seed.

From U.S.A.—Vegetable Seed and budwood of Eurika Lemon, Lisbon Lemon, Calamondin Lime, Clementine Tangerine and Eustas Limequat

From Australia.—Seed of Eucalyptus naudiniana.

From Panama.—Papawseed.

39. PLANT MATERIAL AND SEED DISTRIBUTED.

				1937	1936	1933-35
Advocado Pear—Trees	..	..	No.	—	—	3
Badu Suckers	..	..	No.	—	—	200
Banana Bits	..	..	No.	1,276	325	4,728
Breadfruit Trees	..	..	No.	20	31	17
Cacao, Seedlings	..	..	No.	10	6	—
Cassava Cuttings	..	..	No.	1,565,695	8,600	5,250
Citrus Budded Trees	..	..	No.	—	—	—
Grapefruit	..	..	No.	6,545	4,782	7,280
Oranges	..	..	..	1,570	1,913	2,351
Tangerines and Mandarines	..	..	..	229	1,513	872
Limes and Lemons	..	..	..	445	258	630
Other Citrus	..	..	..	74	81	55
Sour Orange Stock & Seedlings	..	..	..	—	—	1,165
Cocos Tubers	..	..	No.	400	—	424
Coffee, Seedlings	..	..	..	824	800	3,758
Green Manure & Cover Crop Seeds	..	..	Lbs.	64½	50	147½
Dasheen, Tubers	..	..	No.	10	—	150
Corn Seed	..	..	Lbs.	180	135	83
Coconut, Seedlings	..	..	..	—	383	200
Bean, Pea Seeds	..	..	Lbs.	10	15	32
Grasses, Cuttings	..	..	No.	3,756	750	5,200
Mango Trees Grafted	..	..	No.	22	27	38
Nutmeg, Seedlings	..	..	No.	—	—	6
Ornamental Trees & Shrubs Plants	..	..	..	708	410	1,131
Ornamental Trees & Shrubs Cuttings	..	..	..	400	100	350
Papaws Seed	..	..	..	4 ozs.	—	2.0zs
Papaws, Seedlings	..	..	..	86	—	—
Pineapple Slips	..	..	No.	337	350	443
Plantain Bits	..	..	No.	400	—	—
Rice Seed	..	..	Lbs.	—	—	1,362
Sugar Cane Cuttings	..	..	No.	200	7,339	32,833
Sweet Potato Cuttings	..	..	..	900	—	9,120
Tobacco Seed	..	..	Ozs.	—	—	½ oz.
Tobacco, Seedlings	..	..	No.	—	—	1,550
Yam, Tubers	..	..	No.	1,340	250	979
Economic Trees	..	..	No.	38	68	440

CROPS UNDER TRIAL.

40. **Bananas.** No further planting of the Gros Michel Banana took place so that now there are none on the Station.

41. The other varieties planted have been kept in cultivation, the crops being sold locally and used for feeding the pigs.

42. There was a good local demand for plantains during the year and the Station was able to dispose of all that were produced.

43. A small experiment was carried out in the manufacturing of Banana Figs from Lacatan Bananas, using the drying kiln on the Station to prepare them, the figs appeared to be satisfactory and sold well locally but when sent abroad were reported on as not being satisfactory when compared with those made from the Gros Michel Banana.

44. **Citrus.** The general look of the orchards has improved, the trees in most cases having grown well, and the older trees fruited.

45. From the stock trials it would appear that the Sour Orange is still the best stock for this district for all the citrus varieties grown here, except the Meyer Lemon which is doing much better budded on the Local Lemon.

46. The Citrus Manurial and Cultural Trial plots have improved a lot, but so far there is very little difference between the different trials, the plots planted with a cover-crop are a little ahead of the others.

47. There were further plantings of Marsh Grapefruit, Washington Navel Oranges, Valencia Oranges, Genoa Lemons etc.

48. **Tung Oil.** The plot of Aleurites Montana planted in December, 1932 are still flourishing, they all flowered and produced some fruit, one tree gave 2 lbs. of shelled nuts and another one and a half lbs. at one picking.

49. The A. Montana in the 3 acre plot planted out during 1936 is growing rapidly, but the A. Trisperma is not doing so well.

50. Some Aleurites Fordii budded on A. Montana were planted out during the year and a few look as if they will grow satisfactorily.

51. A sample of A. Montana nuts sent to the Imperial Institute were favourably reported on.

52. **Cacao.** The Criollo Cacao planted in 1935 have started to fruit and most of the plants are looking healthy and growing well now that sufficient shade has been provided for them.

53. Further supplies of seed were obtained from the "wild" trees in the Silk Grass Forest Reserve.

54. **Cassava.** The three varieties which gave the best yields in former trials were planted out on a larger scale and five new varieties obtained from Trinidad the year before were put out in trial plots.

55. Except for pig-food and a little for local sales no cassava was reaped on the station during the year, the whole being cut back to provide planting material for the Empire Starch Products Company and other planters, the cut back plants are growing back strongly and it is hoped that by the time the Starch Factory is ready to operate that these plants will give a satisfactory crop.

56. Some Cassava is also being tried as a catch crop between Tung Oil, the Tung Oil planted in rows 30 x 30 feet and the Cassava in a 10 feet wide row down the centre of each row of Tung Oil, the Cassava being planted at the following distances 2' x 3', 3' x 3' and 3' x 4', a part of the Cassava has been inter-planted with Red Kidney Beans.

57. **Coffee.** Both the Liberian and Arabian Coffee gave crops this year, the Liberian trees giving heavy crops, from, both the shaded and unshaded trees, amongst the Arabian varieties the Bourbon and the Erecta obtained from Puerto Rico gave the best results.

58. The Robusta Coffee also flowered and some of the trees are covered with fruit which will be reaped during 1938.

59. Some of the shade through the Arabian Coffee was thinned out and a distinct difference can be seen between the heavily shaded, the lightly shaded and the unshaded trees, the unshaded being the poorest and the lightly shaded ones the best, on one part where the trees that used to shade the Coffee from the early morning sun were cut down the trees have shown severe dieback, this is being rectified by the planting of "Madre de Cacao" (*Gliricidia*).

60. **Ginger.** This crop was again on trial, eight 1/40 acres plots being planted, one of the plots gave 400 lbs. of fresh roots equal 16,000 lbs. per acre all the other plots gave yields averaging over 8,000 lbs. per acre.

61. The big trouble with this crop is the getting of suitable labour for the peeling and curing of it, the local labour that is available not proving efficient at the work, and if an export trade is to be developed it looks as if it will have to be in unpeeled ginger which has been kiln dried.

62. Samples of Peeled Ginger sent to the Imperial Institute received a very favourable report.

63. **Pulses.** Different Pea and Bean Crops are on trial, it being one of the main ideas of the Department to increase and encourage the production of pulse crops in the Colony.

64. Red Kidney Beans were successful when shown in December and January, doing especially well on ploughed and harrowed land when broadcasted.

65. Some varieties of Pigeon Peas obtained from India and Jamaica grew well and seed is being saved for distribution.

66. A variety of Soya Bean obtained through the Imperial College of Tropical Agriculture, Trinidad has done well in its first trials and may prove to be a useful crop for the Valley.

67. Some varieties of Lima Beans obtained from Burma have given good results and it is hoped that they will prove to be an alternative food-crop for the local peasant, whose main pulse food is the imported R.K. Bean.

68. **Vegetables.** Trials were continued, but on account of the heavy rains and floods experienced, were a failure during the later half of the year, some seed however, imported through Messrs. Suttons from India, show signs of proving useful for this district.

69. **Livestock.** The breaking in of young steers for the Department's use and for local planters was continued, and the working stock on the Station continued to give satisfactory service.

70. The rearing of pigs was continued. The Duroc-Jersey boar died during the year.

71. The Berkshire boar has kept in good health and litters from him are proving satisfactory, there has been a little more interest in pig breeding in the District and some of the local planters have started to send their sows to the Agricultural Station for serving.

72. The two imported Berkshire sows gave a lot of trouble when they had their first litters, not being able to stand up to the nursing of their young, this is attributed principally to improper feeding, and it has been found necessary to import some highly concentrated food, rich in Protein, to supplement the very starchy foods obtainable locally, since this has been done there has been a distinct improvement in the sows and their young.

73. **Nurseries.** The Citrus Nurseries were reduced in size as it was found that the anticipated demand for plants was not forthcoming, most of the older trees were disposed of during the year at a very reduced rate.

The propagating of Fruit and economic trees, other than citrus has been going ahead and it is hoped to have some of the following ready for distribution shortly :

Mangoes, Star Apples, Velvet Apples, Golden Apples, Rambutan, Governor Plum, W. I. Breadnut, Breadfruit, W. I. Mamie Apples, Tung Oil, Ackee Nutmeg, Cacao, Coffee, etc.

One of the main difficulties in getting material for propagation is that most of the trees on the Station are still too young to provide suitable material.

74. Extension Work. Various estates and plantations in the Valley were visited and the neighbouring villages of Mullins River, Sittee, and Seine Bight.

Plantations up the Belize River were also visited, and Belize for the Agricultural Show.

75. Buildings. Three labourers' houses were erected and a new store-room and Implement Shed built.

The Assistant Agricultural Officer's quarters were repainted and partly re-screened.

R. A. KITCHING,
Assistant Agricultural Officer,
Stann Creek District.

SECTION IV. (B).

REPORT ON THE AGRICULTURAL STATION AND DISTRICT COROZAL, FOR THE YEAR 1937.

I. THE DISTRICT.

Already the district has shown signs of returning prosperity as a result of the centralization of the sugar cane industry and also the formation of a Producers' Association. It is hoped that an increased number of suppliers will send their canes to the factory during the 1938 and 1939 seasons. Existing methods of cultivation are being rapidly discarded for more efficient and economical methods. Several instances of mechanical cultivation are to be noted as innovations and it has been shown already that results have justified this expense. Agricultural policy of the department now aims at improved intensive systems of cane agronomy with the use of improved and more suitable sugar cane varieties instituting and improving cultural methods and advising the reduction of the ratooning which were approximately 25 years old in several instances.

2. It was hoped that a bumper crop would have been reaped during 1938 but the irregular distribution of rainfall appears to have set back the rate of growth of the canes to a very great extent so that the latest estimates put the tonnage of sugar cane at about 10,000 tons.

3. The citrus industry which has increased in size from a small but efficient beginning, is now assuming economical proportions. It having been demonstrated to the satisfaction of many sceptics, that the Northern districts could produce a very fine high grade fruit, plans were put into effect by the department and carried out by interested growers for the formation of a co-operative association in Corozal. In addition to the handling of citrus which will be at present comparatively small, until the non-bearing areas come into bearing, the association has handled with apparent satisfaction a reviving vegetable trade.

4. While the mean annual rainfall exceeded 67 inches, and so was higher than the average for the past eight years, the weather could not be called ideal from an agricultural point of view. The cold spell at the beginning of the year

was shorter than usual, with the result that the growing period for the short term temperate vegetables was considerably curtailed. During the dry season, which this year was accompanied by some very high temperatures, hail was recorded at 3:30 p.m. on May 8th, and with the air temperature at 93°F. The phenomenon was attended by a wind of Force 6 Beaufort, and severe damage to Banana and Citrus areas near Corozal was reported. On one occasion only was a precipitation of more than 5 ins. recorded, this on July 12th. It is interesting to note that more than 8 ins. of a total of 10.48 fell on four days around this date so that an idea is gained of the comparative drought during remainder of the month. From data later appended it will be seen that figures for soil temperature during August and September were in excess of 87°F. at one foot depth. During the period it was noticed that many areas under citrus showed severe signs of wilting.

The main crops of the district can be noted as follows :—

CITRUS.

5. It is satisfactory to record that an increase in area of the exportable types of citrus fruit trees have been planted and further increases are now being considered. The impetus to this planting is a direct result of the newly formed Corozal Producers' Association, which has been formed during the year.

6. The present area under citrus has now shown an increase over the previous year as follows :—

Year	Variety		Bearing Acres		Non-Bearing Acres		Total Acres
			Seedless	Native	Seedless	Native	
1936	Grapefruit	..	30	60	5	—	95
1936	Oranges	..	1	60	—	20	81
1937	Grapefruit	..	32	80	30	10	152
1937	Oranges	..	—	75	8	10	93
1937	Lemons and Misc.		—	—	5	—	5

7. Large orders of budded citrus trees have been placed with the Department, and it is expected that before the end of the year 1938 the total area under budded citrus fruit will be (including bearing and non-bearing) not less than 135 acres.

COCONUTS.

8. Considerable fluctuation in selling prices for shelled nuts has had a depressing effect on the standard of cultivation, which, already low, has now sunk to almost primitive methods.

9. One large grower has become interested in mechanical inter-cultivation and it is hoped to be able to interest others during 1938.

10. A step towards the improvement of the industry is being effected by the fact that all but two of the growers have decided to ship their produce through the Producers' Association, and by so doing it is thought that their average net returns will be considerably higher than has been the case during the past few years.

The following figures show the production of coconuts for the period 1931-1937.

Year					Production	
1931	..	..	..	..	195,875	
1932	..	..	..	..	314,809	
1933	..	..	..	..	496,767	
1934	..	..	..	..	595,012	
1935	..	..	..	..	1,262,563	
1936	..	..	..	..	851,098	Outbreaks of Red Ring disease.
1937	..	..	..	..	800,000	Figure approximated.

SUGAR CANE.

11. During the year a total of over 5,500 tons of sugar cane were ground at the factory giving approximately 416 tons of sugar. Final returns showed the suprisingly good average sucrose content of normal juice of approximately 17.17. Although the older cane areas consist mainly of Striped bamboo, Purple bamboo and D.625 and some very early Barbados seedlings, the purity of the juice extracted maintained a consistently high level.

12. Further increases in area were planted with sugar cane and at the same time many of the older and inferior varieties are being replaced with more modern types of sugar cane seedlings. During the year under review new areas planted consisted mainly of S.C. 12/4, P.O.J. 2878, B.H. 10 (12), D. 625 and Crystalina, which latter variety has given some very high figures during the recent crop.

13. Due to lack of adequate trained agricultural supervision estimated acreages given by the various estates cannot be accepted as accurate, but some figures are however now available. The area which is to be reaped for the 1938 crop is estimated to be approximately 850 acres and as the estimated production is about 10,000 tons it will be seen that the yield per acre is at the very low figure of 11:8 tons per acre. This figure though only approximate is sufficiently accurate to gauge the state of extensive rather than intensive agriculture.

BANANAS.

14. The position of the Banana industry has become steadily worse during the year and many planters have become convinced that further plantings under present agricultural and economic conditions in this area, are hazardous. It has been the policy of this department to show that neither soil texture, depth, rainfall or transportation facilities can make this crop a commercial success.

15. For the purpose of demonstration an ideal area (as near an ideal area as can be found in Corozal) was selected at the agricultural station and planted with bananas during 1935. Bearing commenced towards the end of 1936 and yields were fairly satisfactory. During 1937 however yields fell off until less than 6 stems per fortnight were available. This experience has been substantiated by independent planters, so that the final conclusion at which one must arrive is that second year production is too low to make commercial production of bananas in this area of the colony an economic proposition.

16. The total area now under bananas, on a comparatively large scale, is approximately 40 acres. This includes an area of about 15 acres which was planted during the year 1937.

17. Towards the end of the year isolated instances of the Sigatoka leaf disease of bananas were noted. Due to lack of interest in the banana as an export crop it is rather difficult to persuade planters to carry out efficient control methods. Also in view of the lack of suitable returns it is hardly economic to carry out any spraying control. Since it was first noted the disease does not appear to have spread to any alarming extent.

MINOR CROPS.

18. Minor crops have not reflected the optimism which has pervaded the larger money crops. Lack of marketing facilities for grain and other small crops is no doubt one of the primary reasons for the prevailing low prices. It is expected however that, due to a comparatively poor yield coupled with a reduced planting area, the corn crop at least will fetch good prices during the early part of 1938.

19. Some interest has been shown in the planting of *Sansevieria* sp. and the area planted, though small, shows in a small way the new interest in agricultural industry.

20. The potentialities of an organised vegetable trade have interested and been investigated by the Producers' Association and as a result some in-

terest has been shown in the growing of these crops. Although the results to date have been worked out on a small scale, they are sufficiently encouraging as to be attractive to small planters and it is hoped that increased areas will be planted during the latter part of 1938.

II. AGRICULTURAL EDUCATION.

21. Progress at the school gardens has been satisfactory during the year and it is to be noted that the initial enthusiasm shown by the pupils has not waned. During the early stages of the school gardening there was some lack of interest shown by parents but latterly it has been noted that this short sighted view has been dropped.

22. There are at present only three schools with official school gardens namely those in the town of Corozal, the Anglican, Catholic and Methodist respectively. All are situated in the grounds of the respective church properties. Other schools which have gardens, and which it is hoped will be officially recognized, are the Anglican and Catholic schools at Orange Walk. Other likely sites that have been visited are the schools at Xaibe and San Narciso.

23. Several of the senior students of the agricultural classes have left their respective schools since the inauguration of this scheme and many have obtained pupils' positions at the Agricultural Station.

24. It is fortunate that this type of student is available for there is a lack of suitable responsible agricultural labour in the district and it is hoped that following suitable training, men who are in demand now, will later become available.

25. A demonstration plot for peasants was first started at the station during 1936 and high yields obtained of the respective crops, Sweet potatoes, Yams, Arrowroot, Tannias and Peanuts, were thought to be a sufficient inducement for the peasant to plant on his own land.

26. In 1937 the plot was continued and enlarged and some interest was shown by the peasants. After the formation of the Producers' Association, whereby sound markets could be obtained for the producer, another plot was started at Santa Clara, approximately half the distance between the two districts.

27. Progress was seriously hampered by the damage caused by pigs, so that no actual yield results could be obtained. Since this time legislation has been put into force whereby protection is afforded to the planters, and it is hoped to commence operations again on this and other plots, one of which will be at Xaibe on the Hondo side of the Corozal District.

III. AGRICULTURAL STATION.

28. It is gratifying to record that the interest shown by the population of the district in the newly formed Agricultural Station has been maintained throughout the year.

29. Some difficulty in procuring suitable adult labour was experienced at the beginning of the year due, primarily to the demand for the mahogany season and also the demand for road labour. In both instances the wages paid are uneconomical for agricultural purposes. While it was consistently advocated that increased production and consumption of reasonably priced agricultural food commodities would increase the purchasing power of the labourer, the crops were small and as a result preference for road work was marked.

30. No new areas were cleared during the year. Consolidation of those areas which were cut during 1936 was carried out by stumping, and, wherever possible preliminary ploughing was undertaken.

31. The following areas with their respective crops make the total area under cultivation :—

32.	1	Citrus	..	..	..	..	..	6 acres
	2	Sugar Cane	..	..	..	..	..	3½ „
	3	Bananas and Plantains	..	..	..	..	..	6 „
	4	Tung Oil, Advocado, and Mango	..	..	..	..	..	3½ „
	5	Corn	..	..	..	..	..	6 „
	6	Tobacco and Irish Potatoes	..	..	..	..	..	1 „
	7	Nursery (including vegetables)	..	..	..	..	..	4 „
	8	Ground Nuts, Broom Corn and Cotton	..	..	..	..	..	2 „
	9	Demonstration and type plot	..	..	..	..	..	2 „
	10	Buildings and Houses	..	..	..	..	..	3 „
	11	Pasture	..	..	..	..	..	14 „
								50½ acres

PLANT MATERIAL AND SEEDS DISTRIBUTED.

33. The following seeds and plants were distributed throughout the year :-

Banana Suckers	..	..	..	..	..	..	10,000
Beans, lbs. Red Kidney	..	..	..	..	..	..	15
Beans, lbs. Bengal	..	..	..	..	..	..	152
Cassava Cuttings	..	..	..	..	..	..	360
Corn Planting, lbs.	..	..	..	..	..	..	2,000
Corn Sale, lbs.	..	..	..	..	..	..	3,500
Citrus. Grapefruit, (budded plants)	..	..	..	..	..	..	10
Lemons, (budded plants)	..	..	..	..	..	..	22
Sour Orange Stock	..	..	..	..	..	..	500
Coco tubers	..	..	..	..	..	..	230
Ornamental Plants	..	..	..	..	..	..	295
Sugar Cane Cuttings.							
B.H. 10 (12)	..	..	..	..	..	..	8,000
P.O.J. 2878	..	..	..	..	..	..	315,000
Misc. vars :	..	..	..	..	..	..	250
Tobacco seed ozs.	..	..	..	..	..	..	1
Yams tubers, lbs.	..	..	..	..	..	..	1,011

METEOROLOGY.

MONTH	BAROMETRIC PRESSURE			RELATIVE HUMIDITY		RAINFALL,		SHADE TEMP.		SOIL TEMP.	
	Corr. M.S.L.	High M.S.L.	Low M.S.L.	Aver- age	High	Low	Ins. Days	Mean Max.	Mean Min.	9:00 a.m.	3:00 p.m.
January ..	29.95	30.04	29.82	78	95	61	4.05	17	84	69	78.2 79.2
February ..	29.87	30.12	29.00	74	99	54	1.89	5	85	65	79.9 81.2
March ..	30.00	30.12	29.84	76	94	52	2.06	7	85	65	80.9 81.2
April ..	29.90	30.14	29.78	89	98	58	1.95	10	86	69	82.9 83.2
May ..	29.89	30.00	29.80	89	97	75	9.21	13	88	70	84.3 84.3
June ..	29.91	30.04	29.72	89	99	70	10.35	22	87	71	85.6 85.5
July ..	29.95	30.06	29.82	81	99	63	10.48	16	87	72	86.5 86.3
August ..	29.95	30.04	29.80	80	99	58	5.57	13	89	72	87.4 87.7
September ..	29.90	30.00	29.80	78	99	63	8.49	17	89	73	87.1 87.1
October ..	29.53	30.06	29.75	75	97	56	9.35	17	89	66	85.5 85.9
November ..	29.96	30.16	29.76	79	93	46	3.36	6	86	60	80.9 81.0
December ..	30.02	30.20	29.80	85	99	60	1.69	13	81	62	78.0 77.9
TOTAL	358.73	360.98	356.73	973	1168	716	67.95	156	1036	314	9972 1000.5
MEAN	29.87	30.08	29.92	81	97	59			86	68	83.1 83.3

35. It was found necessary, in order to correlate the results obtained with vegetable trials with meteorological conditions, to put up a set of Livingstone Atmometers. As these were only installed during November, it is early to discuss results that have been obtained.

PLANT INTRODUCTIONS.

36. The following plants and seeds have been introduced and planted at the station during the year :—

(1) *From Trinidad* (through the Plant Quatantine Station) the following varieties of Sugar Cane :— B2935, B3013, B3125. Soya Beans.

(2) *From the U.S.A.* The following varieties of Tobacco, White Stein Orinoka, Jamaican wrapper, Virginian Bright, Gold Dollar, Valencia and T.R. Peanuts, also vegetable seeds, Bougainvilla and Oleander plants.

(3) *From Puerto Rico.* Tobacco seed of the variety V.9.

(4) *From Guatemala.* Ceiba sp. Jacaranda sp.

(5) *From Colon.* Sola Papaw.

(6) *From India.* Vegetable seed. Five types of Pigeon Pea.

(7) *From Nigeria.* Commercial Cotton.

(8) *From Burma.* Three types of Lima Bean.

(9) *From Australia.* Eucalyptus deglupta.

(10) Local collections, included, Sansaveria, Cassava, Musk Melon, Papaws, Aloes.

CROPS UNDER TRIAL.

Crops under trial at the Agricultural Station during the year :—

Citrus, Sugar Cane, Tung Oil, Tobacco, Bananas, Ground Provisions, Peanuts, Commercial Nigerian Cotton, Sea Island Cotton, Cover crops, Papaws, Vegetable productions and Pulse and Grain crops.

CITRUS.

37. During 1937 most of the proven commercial types of citrus grown on the station, produced small crops of fruit. While the bearing was general throughout the grove, greatest returns were derived from the three types of Lemon, Meyer, Genoa and Villa Franca, arranged in the greatest bearing order. It is to be noted that the most consistent bearing was on the local and rough Lemon stock. On the rough lemon some trees blossomed apparently due to damage of the root system and subsequently showed signs of die-back. In the case of the Genoa and Meyer Lemons blossoming was noted in two fairly well defined periods, May and December, though in many cases the period was extended.

38. Other citrus varieties and types did not show the same satisfactory progress as those mentioned above. The condition of the Washington Navel, Hamlin and Valencia Oranges are not so satisfactory as that of the lemons, although encouraging results are being obtained from the Temple Orange.

39. In the mediocre group of unions must be included the King Mandarin and Satsuma Mandarin. Complete failures are the Thompson Grapefruit trees.

40. As a stock trial, results have convincingly shown that Sour Orange retains its place as the best general stock, though bearing is more delayed than is the case with local Lemon. While bearing is relatively rapid with local lemon, and planters are being urged to plant at least a quarter of their areas with the commercial types on this union for quick results, it is extremely doubtful whether the ultimate results obtained could be as satisfactory as on Sour Orange.

41. Grapefruit as a stock does not seem satisfactory, for Corozal, for of all unions on this stock the Meyer Lemon alone has commenced blossoming, nearly eighteen months after the same scion on local lemon.

42. The following are the types of citrus being tried with their respective stocks.

(A) *Orange Group*.—

Hamlin Orange on Sour Orange Stock.

King Mandarin on Grapefruit Stock.

Parson Brown Orange on Sour Orange Stock.

Satsuma Mandarin on Sour Orange Stock.

Satsuma Mandarin on Grapefruit Stock.

Washington Navel Orange on Sour Orange.

Valencia Orange on Sour Orange.

Temple Orange on Sour Orange.

(B) *Grapefruit Group*.—

Marsh Grapefruit on Sour Orange.

Marsh Grapefruit on Local Lemon.

Marsh Grapefruit on Rough Grapefruit.

Thompson Grapefruit on Sour Orange.

(C) *Lemon Group*.—

Genoa on Local Lemon.

Villa Franca on Local Lemon.

Villa Franca on Sour Orange.

Meyer on Local Lemon.

Meyer on Grapefruit.

West Indian Lime on Sour Orange.

Variety	Stock	Union	Growth	Wind Resist- ance	Number of trees trees	Number trees of blossoming	Remarks
Hamlin Orange	Sour Oranger	Good	Fair	Good	15	—	
King Mandarin	Grape- fruit	Fair	Fair	Good	20	—	Inclined to very long lead- ers.
Satsuma Mandarin	„	Poor	Poor	Good	5	—	Unsuit- able
Satsuma Mandarin	Sour Oranger	Good	Poor	Good	5	—	
Washington Navel	„	Good	Good	Good	25	1	
Valencia	„	Good	Good	Good	25	1	Planted 27.6.36
Temple	„	Good	Good	Good	20	4	Planted 27.6.36
Parson Brown	„	Good	Fair	Fair	5	—	
Marsh G'Fruit	„	Good	Good	Good	25	—	
„	G'Fruit	Good	Good	Good	25	—	Inclined to very long lead- ers
„	L. Lemon	Good	Good	Poor	65	41	
„	R. Lemon	Good	Good	Poor	5	3	
Thompson G'Fruit	Sour Orange	Good	Poor	Poor	8	—	Unsuit- able
Genoa Lemon	Local Lemon	Good	Good	Poor	25	25	Vigourosu growth
Villa Franca Lemon	„	Good	Good	Poor	25	24	„
„	Sour Orange	Good	Excel- lent	Good	25	9	Excellent tree
Meyer Lemon	Local Lemon	Good	Good	Good	11	11	Most pro- lific trees in grove
„	G'Fruit	Fair	Fair	Good	5	3	
W.I. Lime	Sour Orange	Good	Excel- lent	Good	8	7	Excellent trees

SUGAR CANE.

43. Sugar cane being one of the foremost industries in the district particular interest was paid to the multiplication plot. As results at the factory have shown conclusively that among the canes grown locally only the D.625 can come up to the recognised standards, it has become increasingly important to the industry to have a cane that will be found suitable to the climatic and soil conditions.

44. The multiplication plot which consisted of three and three-quarter acres, was planted in June 1936 with $2\frac{1}{2}$ acres of P.O.J.2878, 1 acre of B.H.10 (12) and about $\frac{1}{4}$ acre of S.C.12/4. During this year more than 300,000 cane plants were cut from the P.O.J. acre and sold to the planters in the district.

45. Previous to the planting in 1936 the preparation of the land consisted of a ploughing and a cross ploughing, which followed stumping. Canes were planted on ridges at 5' x 3' spacing and a trial area of 0.42 acres gave in October 1937 after 17 months of growth, a tonnage of 58.79 tons.

46. The rainfall during this period was 137.54 ins. It will be seen therefore that the results are very encouraging.

47. The fertilizer trial which was laid out in 1936 with B.H.10 (12) is to be reaped during the early part of 1938 when it is hoped that some interesting results will be obtained.

48. During the year, reaping of the area planted with the thirty-four varieties, imported from Trinidad was done. These plants were received during April 1936, one of the driest months of the year, so that irrigation was necessary for the growth. Unfortunately this was at the time when the station was in its early stages and lacking adequate water supply, so that the final results obtained at the time of reaping, some sixteen months after planting cannot be said to be truly indicative. Brix readings were taken with a hand Zeiss refractometer in the field, and it will be seen that some varieties, which are apparently of the early group, have given ambiguous results.

49. Other varieties which are included in the multiplication plot and which have not been included in the results appended herewith are E.K.28; S.C.12/4, P.O.J.2725.

50. The final list of varieties which have been planted out at this station is as follows :—

B.H.10(12); P.O.J.2878; S.C.12/4; B.A.11569; E.K.28; P.O.J.2725; B.3138; B.2931; B.3124; P.O.J.2883; M.28; B.3127; B.2977; B.3179; D.11/28; B.3011; M.42; D.49/30; Co.290; B.3439; B.3234; B.3013.

Other varieties which are being given further trial on the large scale multiplication plot, in which are included all the above canes are:—Uba (India) Uba (Naquin), P.R.803, C.P.807, Groen Duitsch N.G., B.3125, Fiji, New Guinea, 24, Oshima, Kavangire, Merthi Kassoer, M.63, and B.2935 varieties all told.

51. Experimental figures to date. Canes cut at 16 months. Rainfall 140.22."

VARIETY	Germ %	A	B R I X B	C	Mean	Canes Per Stool	Maturity	Habit
B.3138	Fair	15.5	19.0	19.5	18.1	101.0	Late	Erect
B.2931	Fair	15.7	18.7	18.8	17.4	39.0	Early ?	Erect
B.3124	V. Good	15.7	18.3	17.9	17.3	47.0	Early	E. to R.
P.O J.2883	Good	12.7	19.6	19.3	17.2	20.0	Early	E. to R. *
M.28	Good	16.3	16.8	17.0	16.9	42.5	Early	Erect
B.3127	Good	13.8	16.7	17.6	16.1	12.0	?	Erect
B.2977	Good	14.0	17.2	16.6	16.0	9.0	?	Recumbent (Poor)
B.3179	Good	12.7	16.6	17.7	15.7	22.5	?	Recumbent
D.11/28	Good	14.0	17.1	14.9	15.4	35.0	Late	E. to R.
B.3011	Fair	13.6	16.3	15.3	15.1	55.0	?	Erect
M.42	Poor	15.7	14.5	14.9	15.0	18.0	Late	E. to R.
D.49/30	Fair	13.1	15.6	16.6	14.0	16.0	?	Erect
Co.290	Good	13.7	14.4	13.3	13.8	59.0	Early	Erect
B.3439	Poor	10.5	12.8	10.5	11.7	18.0	Early	Recumbent
B.3234	Poor	9.5	10.9	10.5	10.3	20.0	?	Recumbent *
B.3013	Fair	—	—	—	—	5.0	?	Too few canes very poor

*Individual canes measured over 21 feet.

TUNG OIL, AVOCADO AND MANGOES.

52. Progress of this block has not been entirely successful though it is rather soon to anticipate failure. The growth during the early part of the year was very poor. Following a long dormant period before which all leaves are dropped, the trees commenced growth towards the end of the year after having lain dormant for about four months. It has been noticed again that growth attains its optimum during those months when the soil temperature falls below 82°F at one foot depth.

53. Blossoming of two of the older Aleurites Montana trees which were planted in September 1935 was noticed during June 1937. Subsequently the blossom shed and no fruit formed.

54. The Advocado section in this block has shown excellent progress and many trees are now over twelve feet high, having been planted in June 1936. It is confidently anticipated that the first crop of fruit should be reaped during the early part of 1939, should the rate of growth continue as it has done up to the present time.

55. Ordinary seedling mangoes planted out in September 1936 have made excellent progress, but it is notable that grafted trees planted under almost identical conditions do not thrive. The trees have now reached the stage for the commencement of the top working experiments, for which they were planted.

TOBACCO.

56. At the beginning of the year a galvanized iron barn with a concrete base, was built for the flue curing of the tobacco grown. The size of the barn was sufficiently large to accommodate, in addition to tobacco, grain and pulse crops, which may require drying.

57. Suitable types of tobacco for flue curing were sown during the latter part of 1936 and transplanted during the early part of 1937. Growth was satisfactory with the White Burley, White Stem Orinoko and Virginia Bright British types. It was noticed however that with the later transplantings in February, seeding and suckering were persistent and the tobacco thus required constant attention.

58. The curing experiments were started in April, and with the earlier "cures" it was noticed that the Virginia Bright provided the most satisfactory texture and quality of leaf in the barn, but in the field the growth of the White Burley was without doubt the most satisfactory. The experiments were then carried a stage further, and when actual figures for yield etc. would have been available, the barn was completely destroyed by fire towards the end of April with a full house of the best tobacco on the station.

59. Since this date a new building has been erected with greater floor protection and with greater distance from the floor plate to the heating flues. Trials for temperature effects have been made and are most satisfactory.

60. Plantings during September were made of the following types of tobacco :—Gold Dollar, Virginia Bright, Puerto Rico Vg ; White Burley, White Stem Orinoko and Jamaican wrapper.

BANANAS.

61. After the commencement of the dry season the general condition of the banana plot deteriorated rapidly and later isolated outbreaks of Sigatoka Leaf Disease were observed, and the adverse effect on yield per acre, of the continuation of low rainfall and dry weather conditions was such as to reduce the yield per acre to not more than two stems per week.

62. Further pruning experiments were started but with the commencement of the dry season it was decided to leave the growth so that humidity would not be lowered unnecessarily in the banana area.

GROUND PROVISIONS.

63. The peasants demonstration plot, again also provided space for the ground provision trials. It was decided that more attention should be paid to the growing of sweet potatoes. Three varieties new to this country and imported during 1936, were put out on a larger scale for comparison with the locally grown types. Against these types, an older importation, Trinidadian Red, gives some idea as to the increased yield which can be obtained by using improved types.

Variety	Origin	Planted	Reaped	Cover	Size of Plot Acres	Yield per acre tons	Remarks
Red Nut	Barbados	9.8.37	8.2.38	Complete	1/32	7.02	
Black Rock	"	"	"	Complete running	"	6.34	Good edible
V.52	St. Vincent	"	"	Very dense	"	5.34	
Trinidadian Red	Trinidad	"	"	Creepers	"	5.21	
Yellow Heart	Local	"	"	Poor	"	3.46	Good edible
Tower Hill	Local	"	"	Dense	1/90	2.59	
Local White	Local	"	"	Poor	1/90	1.30	Barely edible

64. Yams also included in this trial have not yet been reaped. Only four types have been propagated namely Barbados, St. Vincent, Water and Chinese Yam.

PEANUTS.

65. Following the depression in yield caused by the heavy rains during September and October, of peanuts planted during June 1936, it was decided to have further trials with three of the most promising varieties, namely Virginia Bunch, Tennessee Red and Valencia in the order of their relative merit. Although ordered some time before the preparation of the land, the Virginia Bunch seed was not available so that the trial was confined to the Tennessee Red and the Valencia only. Results were as follows :—

Variety	Sown	Reaped	Rainfall	Plot Size	Yield per acre
Valencia	7.9.37	2.2.38	24.20"	1/8th	1112 lbs.
Tennessee Red ..	"	8.2.38	24.20"	1/5th	750 lbs.

66. A small scale plot was set out in Soya Beans obtained from the Imperial College of Tropical Agriculture. The type, which is Venezuelan, gave very encouraging results and it is hoped to be able to carry out a large scale demonstration to wards the latter part of this year. Results obtained as follows :—

Variety	Planted	Reaped	Growth	Size of plot	Yield per acre
I.C.T.A. (Venezuelan)	7.10.37	20.12.37	Excellent	1/28th ac.	756 lbs.

67. Three types of Lima Bean were obtained from Burma. Such small areas were planted as to make yield figures useless on a commercial scale, but the Moki type has given such encouraging results that the locally collected seed is being retained for further trial. The date of planting was in all instances September.

68. Red Kidney Beans of the commercial type were again planted in December and yields, after picking the green beans, were over 650 lbs. per acre.

Trials during 1936 and 1937 indicate conclusively that the most satisfactory time of planting is during the beginning of December until the end of January.

PIGEON PEAS.

69. Five varieties imported from India were planted during March of 1937. Yields were depressed by the rains towards the end of the year so that until further trials are carried out, it is only possible to judge their potentialities on the vegetative growth which was in the following order of merit :—Rahar T.80, Rahar T.15, Rahar T.51, Rahar T.31 and Rahar T.24.

CORN.

70. Yields this year were very poor and as result of poor germination and very late planting. Six acres were planted during the early part of June and yields were less than 800 lbs. per acre.

COTTON.

71. Following up the results obtained during the previous year it was decided to plant Sea Island Cotton during September. Selfed seed which was obtained from the August planting of the previous year was used and although germination was mediocre, individual plants have again shown great promise. "Squaring" of the plants observed 23rd October, Flowering 6th. November and Bolling from the 23rd of December. It will be observed that maturity is rather late being at the earliest more than 160 days, and it is thought that the cold weather experienced during January, when it was as low as 47°F, may have been one of the contributory causes.

72. Some commercial Nigerian Cotton was received and planted at the same time as the Sea Island Cotton. Results for both types are recorded below and indicate the future possibilities for both crops :—

Variety	Planted	Reaped	Loculi Count	Node	No. bolls
Sea Island ..	8.9.37	21.2.38	3.8	6.5	218
Commercial Nigerian	8.9.37	1.2.38	4.1	5.7	43

COVER CROPS.

73. Bengal Bean again proved the most satisfactory cover crop and until a more suitable type is found, is being recommended to planters of coconuts and citrus. Experience gained over two years has shown that growth during the "wet" season, is too vigorous, and periodic cleaning, especially of the citrus, is necessary to avoid malformation of the trees. An indigenous leguminous plant which thrives in comparatively cleared land is being tried out on the station. All of the imported types tried out have failed due to the greater rate of growth of native weeds.

VEGETABLE PRODUCTION.

74. Very encouraging results were obtained at this station during the 1936-1937 season and it is felt that renewed interest is being shown by the planters. In addition to the crops which were grown in the past such as Cabbage, Tomato, Beet and Carrot, further trials with Cauliflower, Celery, Onions, Egg Plants and String Beans, were carried out.

75. In view of the lack of suitable information as to planting dates of the various vegetables an experiment was commenced in which soil temperature at one foot, and rainfall in five day periods, are being correlated with yield data from various times of planting. Optimum yields with the corresponding meteorological data fixes the planting dates for individual crops within fairly well divined limits. Of the many types of each variety of vegetable grown, there has been considerable elimination so that results as tabulated below are of those types which have given most satisfactory results.

76. Results are tabulated herewith, and at the time of writing certain of the crops are still yielding, so that yield data cannot be supplied for all. Further work along this line, and with figures available from the Livingston atmometers, will be carried out during the next season.

Vegetable	Date of Planting	Date of Reaping	Seed Source	Manurial Treatment N.P.K.	Yield per Acre lbs.	Soil Temperature Range at one Foot	Mean
Beet	19.10.37	2.1.38	Stecklers Early Wonder	3:1:4	5,600(1/15)	76.6-86.7	80.3
Cabbage	1.9.37	4.1.38	Stecklers Copenhagen	3:1:6	6,910(1/10)	76.6-87.0	80.0
Carrots	15.11.37	9.2.38	Suttons Inter-Red,	3:1:8	2975(1/30)	74.9-82.4	77.9
Cauliflower	2.11.37	19.1.38	Suttons Early Market	3:1:5	7,728(1/14)	74.9-82.7	78.1
Egg Plant	25.8.37	15.12.37	Hendersons Black Beauty	3:1:4	8,260(1/70)	77.0-87.6	81.0
Tomatoes	11.10.37	18.1.38	Hendersons Marglobe	3:1:4	3,371(1/10)	74.9-86.3	80.0

PAPAWS.

77. Collections of all types of local papaws were made and after eliminations of all unsuitable types, the Mammee was selected. Plantings in January came into bearing during November and results are very satisfactory. Seeds of the Sola papaw were obtained and planted in June. This papaw produces a very desirable type of fruit for packing, being comparatively small and of almost syherical shape. Results obtained as follows :—

Variety			Planted	Reaped	No. Trees	Yield per tree
Mamee	..	..	8.1.37	12.12.37	32	90 lbs.
Sola	..	..	9.6.37	1.2.38	24	45 lbs.

NURSERIES.

78. Considerable extension of the nurseries was carried out during the year as a result of the increased demand for citrus trees. Also the area under vegetables was of necessity, increased.

79. During 1938 it is hoped to be able to put out about 6,000 budded citrus trees. Of this quantity about 3,600 will be budded on sour orange and the remainder on local or mexican rough lemon.

80. Nursery work in connection with the propagation of Pineapples, Avocado, Pimento and other economic as well as ornamental plants, is being carried out.

PRODUCE SOLD DURING THE YEAR.

81. The sum of \$664.50 was collected at the Agricultural Station during the year. Not included in this amount are sales of Banana and Plantain suckers and also some 2,000 lbs. of corn seed sent to the Head Office.

EXTENSION WORK.

82. Plantations throughout the districts were visited. Also the following villages :—Yo Creek, San Pablo, Santa Clara, San Narcisco, Pachachan, xaibe, Yo Chen, Xcan Luum, San Maximo, Caledonia, Santeneja and Paraiso. Agricultural areas on the Belize River were visited and also the Agricultural Station, Stann Creek.

83. Ploughing of lands was carried out by the department at Santa Cruz Estate. Results are justifying the expenditure and it is thought that greater activity in this line will be observed during 1938.

84. A demonstration plot was started at Santa Clara, about half the distance between Corozal and Orange Walk. Finance being the limiting factor for a successful plot, and funds being low, it was not possible to have an efficient demonstrator at the plot so that results have fallen below expectations. It is hoped however to be able to continue this work during 1938.

H. L. MANNING,
Assistant Agricultural Officer,
Corozal.

SECTION IV. (C).

REPORT ON RICE STATION AND DISTRICT, PUNTA GORDA
FOR THE YEAR 1937.

DISTRICT.

1. In spite of the demands of the Logging Industry and the building of the Punta Gorda-San Antonio Road, on the local labour available, there was some extension of the areas under banana and rice.

2. Heavy rains followed by short, dry, spells again affected the planting of grains many, after several resowings, again failed to reap a crop. Prior to 1934 it seemed the practice to rely on the dry spell during April-May to clear lands for planting, but, during this period for the past three years, unusual heavy rains have upset the plans of many and restricted extension to a marked degree.

BANANAS.

3. Three hundred and ninety thousand (approx.) stems of bananas valued at \$127,000 (approx.) were sold during the year as against 247,534 stems (\$74,634) for 1936 and 160,000 stems (\$49,676) for 1935—an appreciable increase. Of this 28% was supplied by Monkey River and vicinity, the balance coming from the Punta Gorda-Sarstoon end. The United Fruit Company handled about 80% of this trade; the balance going to the few schooners trading along this route.

4. Rigid inspection and the refusal of the chief buyers to take sixes, during the latter part of the year, caused a temporary setback chiefly to the careless grower who will not exert himself to practise intensive cultivation nor carry his fruit as carefully as he should.

5. The rapid spread of Sigatoka (*Cercopsora*) Leaf Disease—evidence of its presence having been observed throughout the district—affected production and, in spite, of more lands being planted to this crop, must, sooner or later, appreciably reduce this growing industry unless suitable Control measures can be adopted.

6. Panama Disease is also on the increase especially on the Sarstoon, Temash and Monkey Rivers. Here again compulsory Control Measures seem necessary to check its spread.

7. The following are the quarterly shipments for the past three years :—

Quarter	1935		1936		1937	
	Stems	Value \$	Stems	Value \$	Stems	Value \$
						(approx.)
March ..	29,192	7,043	34,947	9,888.05	89,848	24,200
June ..	35,635	12,128	49,227	15,042.00	119,000	36,521
Sept. ..	46,823	16,000	80,923	24,395.00	119,200	43,800
Dec. ..	48,305	14,505	82,437	25,309.29	70,600	21,720
Total	160,000	49,676	247,534	74,634.34	398,648	26,241

RICE.

8. There was an increase in the acreage grown though much was lost through unfavourable weather conditions and damage to seedlings by Froghoppers.

9. An attempt to grow Rice in the Swamp lands adjoining the Punta Gorda-San Antonio Road did not meet with the success anticipated, only one of the ten planters who had decided, having availed himself of this opportunity. Many through the short dry spell finding it impossible to clear their other areas for banana in time to attend to this new venture before the onset of the rains. The success of this individual has, however, caused an awakening and many hope to follow in the coming season.

10. Lowlying Crown Lands on the Sunday Wood Creek and along Deep River have been also applied for to be used as permanent Rice fields. The approval of Government to these other efforts is being anxiously awaited.

11. Financial assistance from Government to grow Rice on a commercial scale was unsuccessfully sought.

12. A Rice-Growing Competition—the first of its kind to be held in the Colony—for the best half acre plot of (a) Dibbled Padi and (b) Transplanted Padi confined to the Settlement, aroused interest throughout the district. It is hoped to hold this annually when the whole District will be included.

13. At a Farmer's Field Day held on the 6th Decembre the Acting District Commissioner, Dr. E. C. Savona distributed prizes to the of fllowing :—

1st Prize—One Ransomes' Victory Plough. James Richards 64.

2nd Prize—\$10.00 Josephine Richards 58.

7 Consolation Prizes of \$2.50 each to Albert Williams, E Gonsalez, H. Williams, T. Tulsey, Emma Parkinson, Lena Morey and James Duncan.

14. One Planter made use of the Station's Reaping Gang to harvest his crop ; others borrowed grass knives and made use of the Mechanical Thresher.

15. The increased price of \$1.75 per 100 lbs. of padi offered by the Board of Agriculture added new zest to growers.

SUGAR.

16. Four Mills ground during the year with fair results as froghoppers did not do as much damage as in previous years.

17. Cane farming is being tried out by a small planter to supply a local mill.

CORN AND BEANS.

18. Again these crops suffered ; only about 60 % of the area sown yielding a crop.

19. There is likely to be a shortage of these commodities in the coming year due partly to conditions already referred to but more so to the craze for Banana growing which has attracted the attention, time and labour of the Aboriginal Indians hitherto, the chief producers but, who, alas, seem now disposed to neglect their native foods for imported foodstuffs which their banana sales now allow them to buy.

CITRUS.

20. Three planters have gone in for the cultivation of Grapefruit (Marsh Seedless from the Stann Creek Agricultural Station) whilst another awaits his supply of plants.

21. The local aversion to plant on mounds is slowly being overcome. Narrow mounds to keep down expenses and deep planting are common faults ; Gummosis and Drunken Baymen are causing some trouble.

COCONUTS.

22. Many young plants succumbed to the ravages of the Cohune Beetle (*Rhynchophorus palmarum*, L.) and a case of Scales (*Aspidiotus destructor*, Sign.) was met with. In spite of these drawbacks this crop is being extended.

CACAO AND COFFEE.

23. An attempt to find a market in Belize for the Cacao and Coffee produced by the Indians of Columbia and San Antonio is in hand—150 lbs. having been sent to merchants. Word is being awaited to see what improvements are desired to meet the requirements of the market.

24. With an assured market—and there appears to be no unsurmountable difficulty why with the present supply the quality cannot be improved to meet the demands of the local market—these crops can be extended to advantage.

LIVESTOCK.

25. There has been a slight increase in Livestock Rearing—one small ranch having been started during the year whilst a few planters bought cattle and mules for transporting bananas and for ploughing, from the nearby Republics.

26. Lack of suitable pastures and scarcity of forage plants are main obstacles to progress whilst the need of improved breeds in cattle and pigs is apparent.

27. Two thousand four hundred and eighty hogs were shipped to Belize chiefly from the Indian villages of Columbia and San Antonio and 21 Steers and 7 Mules imported from nearby Republics—inspected and allowed to land.

PEST AND DISEASES.

28. Seven Gallons of Irrigasoil were distributed free to planters to control Panama Disease and 22-7 lbs. Tins of Cymag sold to control the Wee-Wee ant (*Atta* sp.) and Froghoppers (*Tomaspis* spp.).

AGRICULTURAL INSTRUCTION.

29. With the view of training future agriculturists, four School Gardens were started. The response by both Teachers and Pupils was encouraging. Several visits were paid by the writer when planting hints were given.

30. A course of Lectures in Agricultural Science and Practice to the Teachers in the District should prove of great value in this new phase of rural life and not only lead to Agriculture being included in the School Curriculum but help to further present efforts towards an agricultural awakening.

31. An increased interest in the District is being shown by foreign planters from the nearby Republics and the U.S.A., a few of whom settled during the year.

32. The Agricultural Officer lectured to a body of planters on the expense and impracticability of spraying banana fields as they exist at present for Sigatoka Control, on the 14th October, so as to allay the feeling of unrest occasioned by the rapid spread of the disease.

33. At the request of sundry wouldbe settlers the writer visited and advised regarding soil types, crops, cultivation methods, pests and diseases etc.

CO-OPERATION.

34. As predicted in the 1936 report the recently formed Toledo Producers' Association remained moribund for the greater part of the year 1936. With the need there is for thriving peasant proprietary system, supported by Government's new policy of selling out small blocks of land rather than leasing as heretofore, thus fostering permanent rather than 'shifting' cultivations, small Co-operative Credit Societies such as exist in British Guiana, should assist planters in procuring ploughs, draught animals and the like, by short loans subscribed to among the planters themselves with some assistance by way of loans from Government direct to these societies according to amount subscribed to by them. Transportation difficulties (now a bugbear to many) Pest and Disease Control, improved livestock breeding, marketing of produce etc. can be localised and dealt with co-operatively in place of the present policy of waiting on Government to attend to every ache and ailment.

RICE MILL.

35. Twenty-eight thousand six hundred and forty-eight pounds of padi (\$488.89) were purchased during the year and 3,186 lbs. of corn at prices ranging from \$1.30 to \$2.00 per 100 lbs.

36. Thirty-seven thousand seven hundred and twenty-two pounds of padi milled in March, July and November to suit local demand yielded 86 bags

(224 lbs. each) of rice. 500 lbs. unpolished specially ordered and three bags prepared expressly for the Belize Agricultural Show ; 2,403 lbs. of Bran and 2,239 lbs. broken ends (Chicken feed).

37. Unfounded prejudice against the locally milled rice raises the question of the imposition as in the case of Corozal Sugar, of a small import tax on the foreign article, not only as a protective measure but to provide funds for Competitions, and to empolder swamp lands to be used as permanent rice fields so as to stabilise and expand the industry.

38. Two thousand eight hundred and seventy-two pounds of seed padi were loaned to planters. 1,441 lbs. outstanding to date. 418 lbs. from 1935 and 30 lbs. from 1936 ; 818 lbs. supplied Head Office for distribution.

39. The following is the Revenue earned :—

Sale of 56 Bags of Rice (774 lbs. shipped to Belize Show excluded)	\$391.37
Sale of 56 Bags of Corn (8,637 lbs.)	227.11
Sale of 56 Bags of Unpolished Rice (400 lbs.)	11.50
Sale of 56 Bags of Bran (1,960 lbs.)	15.00
Sale of 56 Bags of Broken ends as Chicken Feed (1,995 lbs.) ..	33.40
Threshing fees 4,767 lbs. padi at 15. per 100 lbs.	7.12
Seed padi pad for (75 lbs.)	1.50
Rice Hulls sold	.95
	\$687.95

40. The following are required :—a concrete drying floor, a shed to store firewood, concrete drains around the building and a roadway to facilitate the delivery of milled products.

THE RICE EXPERIMENT AND DEMONSTRATION STATION, PUNTA GORDA.

41. Rain fell on 277 days with a total precipitation of 187.86 inches ; August was the wettest month with 29 raindays and a precipitation of 33.84 ins. but July 30th (4.72 ins.) was the wettest day ; the coldest, the evenings of the 4th and 5th (55°F) and 24th April the hottest with 95°F. in the shade.

The following are the monthly records for the year :

MONTH	RELATIVE HUMIDITY			(SHADE)		SOIL		Rainfall Inches	Rain Days
	Mean	Highest	Lowest	Air Mean	Temperatures Max. Min.	9 a.m.	3 p.m.		
January	83.7	93	70	83.	66.	—	—	8.31	28
February	80.	95	72	85.1	63.9	77.7	78.3	10.03	19
March	76.7	95	66	86.4	65.1	79.9	80.1	3.49	15
March	76.7	95	66	86.4	65.1	79.9	80.1	3.49	15
April	75.	95	58	88.2	69.5	82.2	83.	9.17	16
May	76.	89	66	88.7	70.9	84.6	85.5	13.49	20
June	79.	89	68	88.5	71.1	83.8	84.6	23.29	28
July	82.	95	70	87.	71.4	82.8	83.0	33.45	31
August	83.	90	66	87.7	70.5	82.9	84.5	33.84	29
September	80.00	91	73	88.3	71.3	83.	84.6	26.35	26
October	80.	95	69	88.00	67.00	81.2	83.1	15.08	27
November	76.00	87	66	84.6	62.5	77.8	79.1	3.39	12
December	83.	98	64	81.3	62.00	75.	76.4	7.97	26
MEAN	79.5	93	67	86.4	67.6	80.9	82.00	—	—
TOTAL	—	—	—	—	—	—	—	187.86	277

PADI GROWN.

42. All the varieties grown during the previous years were once again repeated. Two acres of 'new' land were brought into cultivation, all old areas already cropped, in some cases for four successive seasons, being once again cultivated primarily to disprove the prevailing opinion that a good crop of Rice can be got only on 'new' lands.

43. Once again it was emphasised by experience that to condition these lands properly so as to get the best and most economical results, a suitable plough and tractor are indispensable. Whilst the latter can be obtained locally at a reasonable rental a plough suitable for such traction is not available.

44. Present indications show that many will welcome hire of plough and tractor to plough their fields to cultivate this crop. The short dry spell, the number of stumps to be pulled, shortage of draught animals, poor pasturage and heavy weed growth—the results of a heavy rainfall and at least three ploughings being found indispensable to keep down after weeding costs—seem to make this an important factor in the expansion of this industry.

VARIETY TRIALS.

45. Of the three trials laid out, two were abandoned owing to poor growth. The results of the one reaped (transplanted) show No. 79 a consistent good yielder according to local standard yields; D.II4 2nd and Lead 3rd. These are all medium grains and were tried out to meet the local market in which long grains do not appear to be popular. For this reason Damerara Creole and H.7 better yielders but long thin grains had to be set aside temporary.

Varieties	Lbs. Padi per Acre	Order of Merit.
Lead	1440	3rd.
No. 79	1774	1st.
D.II4	1467	2nd.

Sig. Diff.

46. Other trials included :—Dibbling, transplanted under dry as well as Irrigated conditions with the following results :— (TABLE I.

47. Progeny Row Plots for Selection work were maintained.

48. The following short-aged types were received from (a) Ceylon :—Suduheenata (h.f-9) ; Pachchaiperumal 2462/11 ; Perillanal 2601 ; Vellai Perunel 28724 ; Oddavalan 2449/20 (b) from Java :—Lembhoengan, Menoeren 114 (Bearded vars.) Pote and Sempor (unbearded vars.) for trials during 1938.

49. Five hundred and fifty-five pounds of seed padi were loaned to planters and 254 lbs. sent to Head Office for distribution.

50. Preference for the local shortaged variety, a poor yielder, continues as this crop (rice) is still regarded as a catch crop to Bananas and longaged varieties when grown as such seem to have a deleterious effect on the banana.

51. To hasten the establishment of a rice industry the keen interest in which can now be gauged in the rush there is to occupy available swamp lands of the Crown, it will appear that apart from a tractor and plough for hire to growers, a Co-operative Credit Society whereby financial assistance can be had by those who, too far removed must invest in their own draught animals and ploughs and the opening up of sub-stations for further trials of promising varieties prior to distribution seem necessary.

BANANAS.

52. A collection of the various varieties in the district is being made.

53. A manurial trial in which Niciphos II and Nitro-Chalf were used was abandoned owing to the inroads of the Sigatoka Leaf Disease.

LEGUMES.

54. The following Legumes were tried out with fair results :—Soya Bean (Venezuela from I.C.T.A.) 840 lbs. first trial to the acre ; Pigeon Pea (Rahar T. 31; 51; 80; 24 and 11115 from India ; T.31 proved the earliest yielding a crop 4 months after sowing ; Madagascar Beans ; Pegya, Mokl 27-30 ; Mokl 32-40 from Burma ; Jerusalem Pea from Jamaica ; Red Kidney and Black Beans (Local) ; Mung Bean, Cow Pea ; and Crotalaria (spp.) and Tephrosia (Spp.) as Cover Crops were also planted out for repeated trials.

COCOA AND COFFEE

55. Trials of these crops are now in hand.

VEGETABLES.

56. The heavy September rains hampered the extensive trials of Suttons' assorted collection of seeds planned. Early Patna and Early Market Cauliflowers did best when put out in October–November. Sweet Potatoes, Cocoas, Yams and Papaws are under trial.

CITRUS.

57. A citrus nursery to supply local orders for budded grapefruit was started during the year, Sour Orange, Rough Lemon, and Rangpur Limes having been set out.

OTHER CROPS.

58. To encourage the planting of fruit trees several varieties are now being raised for sale to those interested.

SEED DISTRIBUTION.

59. Seeds of the following were distributed :—Crotalaria, Lima Beans, Cauliflower (seedling) Breadnut (*Artocarpus incisa* var. *nueifera*) and Golden Apple (seedlings).

REVENUE.

60. The following is the Revenue earned :—

Sale of Padi (7372 lbs.)	..	..	..	..	..	\$127.08
Sale of Seed (160 lbs.)	..	..	..	..	..	3.20
Sale of Bananas (522 stems)	..	..	..	..	..	154.86
Sale of Vegetables	..	..	..	..	..	3.67
Sale of Seedlings	..	..	..	..	..	.20
						\$289.01

DISEASES AND PESTS.

61. The lack of finance and the absence of a suitable Spray Pump retarded work in Sigatoka (*Cercospora musae*) Leaf Disease Control. Spraying with Bordeaux Mixture to which an adhesive was added to offset the effects of the heavy rains, was possible when a Bucket Spray and finally an Ondine Pneumatic Pump was loaned from Stann Creek Agricultural Station. The prospects were not in the least discouraging following a rigid pruning of diseased leaves.

62. Positive infection was found in the leaves of the Plantain and also the Wild Plantain.

63. Present indications seem to show that the disease increases in virulence when there are high winds accompanying driving rains and a high humidity ; marked increase in its intensity being noted in May–June ; August–September ; and November of the year under review.

64. Black Smut (*Tilletia horrida* Tak ??) was observed on the following varieties of padi :—Lead, D114, No. 29, No. 79, H.6, and Blue Stick doing minor damage.

TOURS AND INSPECTION.

65. Visits were paid to the School Gardens and sundry holdings throughout the district when planting and marketing problems were discussed and disease and pest control initiated ; advice as regards lands for cultivation was also given and planters assisted in getting lowlying Crown lands for rice-growing.

66. The writer whilst on short leave from 27th August to 5th September visited the United Fruit Company's Estates at Bannerara, Guatemala to study control work in Sigatoka. Opportunity was also taken to visit sundry holdings to study planting methods of the peasants.

67. The Agricultural Instructor was again called upon by the Police to assist in the identification of Seeds of the Indian Hemp.

BUILDINGS, &c.

68. Three new labourers' huts were built ; also five culverts and a Combined Office and Storeroom.

69. Sundry products were prepared for the Agricultural Show held in Belize on 1st and 2nd April.

DANL. D. HAYNES,
Agricultural Instructor.

TABLE I.
COMPARATIVE STATEMENT OF BANANA SHIPMENTS BY AREAS. 1933-1937.
BUNCHES.

AREA	1933			1934			1935			1936			1937		
	U.F.Co.	Sch.		U.F.Co.	Sch.		U.F.Co.	Sch.		U.F.Co.	Sch.		U.F.Co.	Sch.	
Belize ..	11,328	—		26,481	—		37,152	—		134,062	—		235,182	—	
Stann Creek ..	31,589	—		89,081	—		108,961	—		134,144	—		143,767	—	
Mullins River ..	1,981	—		6,037	67,059		5,127	28,556		8,774	143,923		10,327	—	
Commerce Bight ..	661	—		3,619	—		3,927	—		11,093	—		13,025	—	
Sittee River ..	9,100	—		10,474	—		12,333	—		16,597	—		20,757	—	
Monkey River ..	22,457	—		49,749	—		70,183	—		61,928	—		96,226	—	
Punta Gorda ..	—	—		9,339	31,453		56,323	33,494		104,622	80,984		223,639	—	
TOTAL, ..	77,116	64,546		194,780	98,512		294,006	62,050		471,220	224,907		742,923	196,062	
Combined Total	141,662	—		293,292	—		356,056	—		696,127	—		938,985	—	
VALUE \$..	48,239	—		93,721	—		125,274	—		244,238	—		330,491	—	

TABLE I.

VARIETY	Sown Broadcast		Dibbled		Transplanted Dry		Transplanted		Total Reaped Lbs.	Type of Grain
	Lbs. Reaped	Lbs. yield per acre	Lbs. Reaped	Lbs. per acre	Lbs. Reaped	Lbs. yield per acre	Lbs. Reaped	Lbs. yield per acre		
Demerara Creole	176	1,100	—	—	262	1,500	226	1,800	664	Long thin
H. 6. ..	—	—	—	—	—	—	17	1,700	17	" "
H. 7. ..	—	—	439	1,786	17	1,756	108	2,700	564	" "
Br. Honduras Creole	123	900	50	1,500	20	1,200	15	1,100	208	Medium
Kalyaman ..	235	1,250	—	—	—	—	240	2,500	475	Long thin
Blue Stick ..	—	—	—	—	—	—	40	2,200	40	Medium
Upland ..	227	1,200	389	3,000	7½	1,700	14	2,800	637½	" "
No. 29. ..	186	1,100	—	—	37	1,200	20	1,250	243	" "
No. 75. ..	—	—	—	—	48	2,100	27	3,800	75	" "
No. 78. ..	—	—	—	—	19	2,000	15	3,200	34	" "
No. 79. ..	285	1,200	33	1,440	1,282	2,080	33	2,200	1,633	" "
D. 114. ..	—	—	246	1,200	226	1,400	35	1,210	507	" "
Lead ..	—	—	—	—	193	1,200	54	2,420	247	" "
A. K. Kulu ..	—	—	—	—	—	—	6	1,000	6	Short
McKenzie Large ..	—	—	—	—	—	—	30	3,900	30	Medium
McKenzie Small ..	—	—	—	—	—	—	18	3,400	18	Short
Ramarajara ..	—	—	—	—	—	—	38	1,700	38	" "
Kristna Kata Kulu ..	—	—	—	—	—	—	6	1,210	16	Medium Sht.
*TOTAL ..	1,232	—	1,157	—	2,111½	—	952	—	5,422½	—

*Mixed lots not included.

TABLE II.
EXPORTS OF COCONUTS AND COPRA.

COCONUTS.

	1932	1933	1934	1935	1936	1937
Number	2,974,220	3,610,450	5,232,861	6,589,320	4,310,110	4,958,980
Value	\$24,860	\$32,367	\$64,855	\$96,515	\$63,930	\$77,267
Approximate average Value per 1,000 ..	\$8.35	\$8.96	\$12.39	\$14.64	\$14.83	—

COPRA.

Pounds	995,704	812,233	332,883	5,230	425,996	356,708
Value	\$14,770	\$11,742	\$5,010	\$52	\$10,456	\$10,975
Approximate average Value per 100 lbs.	\$1.48	\$1.43	\$1.50	\$0.99	\$2.45	\$3.01

TABLE III.

EXPORTS OF CITRUS FRUITS AND CANNED AND JUICED FRUIT.

ARTICLE	1933		1934		1935		1936		1937		
	Quantity Cases	Value \$	Quantity cwt.	Value \$	Quantity cwt.	Value \$	Quantity cwt.	Value \$	Quantity cwt.	Value \$	
Grapefruit	..	5,094	13,462	13,400	33,569	15,450	32,280	18,781	41,177	14,852	31,430
Oranges	..	420	967	2,143	1,896	1,595	1,720	291	527	324	587
Tangerines	..	62	154	197	478	117	219	181½	326	170	315
Grapefruit Canned	..	—	—	15,904	1,180	39,104	1,999	158,531	8,381	90,090	4,663
Grapefruit Juice	..	—	—	14,300	500	4,706	156	68,494	2,703	2,997	140
TOTAL VALUE	—	\$14,583		\$37,623		\$36,374		\$53,114		\$37,135	

TABLE IV.

PADI PRODUCTION BY AREAS 1937.

AREA	1933 (lbs.)	1934 (lbs.)	1935 (lbs.)	1936 (lbs.)	1937 (lbs.)
Belize River—be'cw Big Falls including Black and Spanish Creeks	..	..	..	..	..
Belize River—above Big Falls	..	..	..	..	..
Sibun River ..	..	..	..	..	..
Manatee ..	..	..	..	..	..
Stann Creek ..	..	..	..	..	..
Northern River ..	..	..	..	..	..
Corozal District ..	..	..	..	..	..
Orange Walk District ..	..	..	..	..	..
Toledo Settlement ..	..	..	..	..	..
Monkey River ..	..	..	..	..	..
Baranco ..	..	..	..	..	..
New Haven ..	..	..	..	..	..
San Antonio ..	..	..	..	..	..
Columbia ..	..	..	..	..	..
Temash ..	..	..	..	..	..
San Antonio Swamp ..	..	..	..	..	..
Golden Stream ..	..	..	..	..	..
Temash, Moho and Sarstoon Rivers	..	..	..	..	..
Punta Gorda ..	..	..	..	..	..
Rio Grande ..	..	..	..	..	..
	176,846	296,238	191,645	80,977	40,910

RAINFALL, 1937.

Appendix A.

OBSERVATION STATION	January		February		March		April		May		June		July		August		September		October		November		December		Totals		Raindays Total	
	1937	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937	1936
COROZAL DISTRICT.																												
TOWN—																												
Agricultural Station	4.83	6.31	1.16	1.17	1.89	.07	1.36	2.31	10.33	6.32	9.85	19.41	10.68	12.22	2.83	5.83	10.47	17.48	9.50	10.43	4.36	10.83	2.05	.85	69.31	92.23	164	114
Louisville	4.05	6.27	1.89	1.15	2.06	.14	1.45	2.45	9.21	6.23	10.35	17.70	10.48	12.36	5.57	6.04	8.49	19.16	9.35	9.73	3.36	12.41	1.69	.59	67.95	94.23	156	176
Penbroke Hall	6.63	6.66	3.14	2.39	1.45	—	.88	2.58	6.99	5.24	8.39	19.59	7.39	11.63	8.07	11.27	6.15	17.37	5.34	6.20	2.81	6.26	3.84	1.70	61.08	90.89	128	142
.. ..	4.82	6.53	1.34	1.24	.53	.15	1.19	3.35	6.46	6.84	9.97	20.63	6.95	12.74	8.07	5.50	5.37	15.93	5.62	8.61	1.88	8.67	1.98	1.46	54.18	91.65	147	180
ORANGE WALK DISTRICT.																												
TOWN																												
Freshwater Creek	7.14	8.37	5.23	2.58	2.47	.90	2.25	6.81	6.02	8.48	9.89	14.25	13.14	11.50	8.06	9.01	7.48	14.58	9.16	6.94	2.68	9.95	3.21	1.66	76.73	95.03	182	213
.. ..	5.55	8.80	2.65	2.66	3.01	1.61	1.97	1.89	7.62	8.03	9.57	23.48	10.70	13.24	7.30	7.06	6.12	10.12	6.71	10.23	1.34	11.09	4.49	2.34	67.03	100.55	158	185
BELIZE DISTRICT.																												
TOWN																												
Bamboo Patch	5.69	4.59	1.05	3.85	3.95	1.47	5.08	4.30	2.51	10.14	11.26	15.30	10.55	11.98	6.41	6.56	10.69	12.83	8.29	14.37	4.87	23.90	5.08	2.51	75.43	111.80	195	231
Turneffe	10.87	4.94	3.60	1.39	3.84	.76	2.86	5.08	9.25	10.91	12.39	15.26	15.20	10.30	8.79	6.43	5.77	15.29	9.03	11.35	2.99	14.31	7.54	3.15	92.13	99.17	144	164
.. ..	—	—	1.37	—	3.20	—	3.46	—	3.58	—	3.50	—	11.52	—	3.01	—	7.63	—	6.38	—	9.86	—	5.69	—	59.20	—	147	—
CAYO DISTRICT.																												
TOWN																												
.. ..	4.70	5.57	3.00	4.25	2.00	.36	5.41	.87	2.85	6.37	2.78	14.39	8.75	12.78	3.58	3.73	5.27	4.66	5.87	6.40	1.18	10.57	7.08	1.24	52.47	71.19	71	167
STANN CREEK DISTRICT.																												
TOWN																												
Agricultural Station	3.59	5.11	5.53	1.53	3.42	.29	1.52	4.11	8.88	11.54	14.14	7.21	14.86	22.61	5.00	6.55	11.06	11.56	7.85	12.65	3.90	25.27	6.02	4.07	85.87	112.50	100	139
Industrial School	7.16	4.07	4.31	3.72	4.46	1.66	2.92	6.40	8.45	19.42	18.27	10.65	24.33	27.48	11.67	6.29	13.02	10.24	13.02	11.14	4.76	23.19	9.01	3.74	121.38	128.00	194	199
Alta Vista 16 miles	9.06	6.29	5.26	4.68	2.41	4.09	4.09	5.82	14.79	18.83	17.44	12.86	23.48	27.19	9.88	10.33	12.17	13.39	14.16	16.17	4.76	16.56	9.04	3.90	126.54	140.11	223	208
Middlesex	10.19	5.87	2.57	6.55	5.53	1.39	4.23	7.24	16.47	19.58	19.81	12.14	30.78	28.88	10.00	11.79	16.18	14.03	15.55	15.81	5.26	19.69	9.82	6.76	146.39	149.75	152	188
.. ..	10.15	7.63	2.37	9.47	3.18	2.55	5.43	9.14	10.62	20.57	23.08	16.95	32.38	31.04	6.40	15.53	14.44	13.36	11.36	15.09	1.86	13.55	4.20	3.92	125.49	158.80	159	204
TOLEDO DISTRICT.																												
TOWN																												
Agricultural Station	12.02	10.63	10.00	5.45	2.61	4.11	10.84	5.46	13.75	12.74	26.92	30.13	36.20	22.35	31.18	20.68	31.29	25.49	14.19	30.27	4.76	8.76	6.23	11.58	199.99	187.61	179	202
Tropical Oil Products Co. ..	8.31	7.53	10.03	7.97	3.49	1.70	9.17	4.66	13.49	12.87	23.29	36.02	33.45	45.01	33.84	18.89	26.35	21.22	15.08	17.73	3.39	10.70	7.97	6.24	187.86	192.04	277	273
.. ..	8.10	9.78	3.60	8.97	1.95	1.87	7.72	4.66	10.68	12.46	15.70	24.68	23.28	21.73	18.75	14.48	19.86	23.38	14.57	16.68	1.97	12.40	6.70	4.43	132.88	155.52	212	242

TABLE V.

AGRICULTURAL PRODUCE EXPORTS 1937.

PRODUCT							Destination	Quantity	Value \$	% by value of All Agricul- tural Produce 1937	% by value of All Products 1937
Coconuts	(No.)	..	..	..	..	..	U.S.A.	4,958,980	77,267	16.83	5.45
Copra	(lbs.)	..	..	..	..	..	Mexico	356,708	10,975	2.32	.80
Bananas	(Bchs.)	..	..	..	..	..	U.S.A.	938,985	330,491	72.02	23.33
Plantains	(No.)	..	..	..	..	..	U.S.A.	272,600	2,228	.50	.16
Rum	(Galls.)	..	..	..	..	..	Cayman Is.	763	783	.20	.06
Grapefruit	(Cwt.)	..	..	..	..	..	U.K.	7,074	14,866	—	—
							Canada	7,380	15,628	—	—
							Bermuda	398	936	—	—
							TOTAL	14,852	31,430	6.90	2.20
Oranges	(Cwt.)	..	..	..	..	..	U.K.	211	377	—	—
							Canada	73	136	—	—
							Bermuda	40	74	—	—
							TOTAL	324	587	.13	.04
Tangerines	(Cwt.)	..	..	..	..	..	U.K.	78	145	—	—
							Canada	68	126	—	—
							Bermuda	24	44	—	—
							TOTAL	170	315	.07	.02
Grapefruit Canned	(lbs.)	..	..	..	..	..	U.K.	21,564	1,031	—	—
							Canada	67,686	3,590	—	—
							Bermuda	840	42	—	—
							TOTAL	90,090	4,663	1.00	.33
Grapefruit Juice	(lbs.)	..	..	..	..	..	U.K.	897	40	—	—
							Canada	2,100	100	—	—
							TOTAL	2,997	140	.03	.01
										100.00	32.40
Total Value of Agricultural Exports							..	..	\$458,879	—	32.4%
Total Value of Forest Produce							..	..	\$948,834	—	66.9%
Total Value of Marine Produce							..	..	\$10,510	—	.7%
									\$1,418,223	—	100.00%

